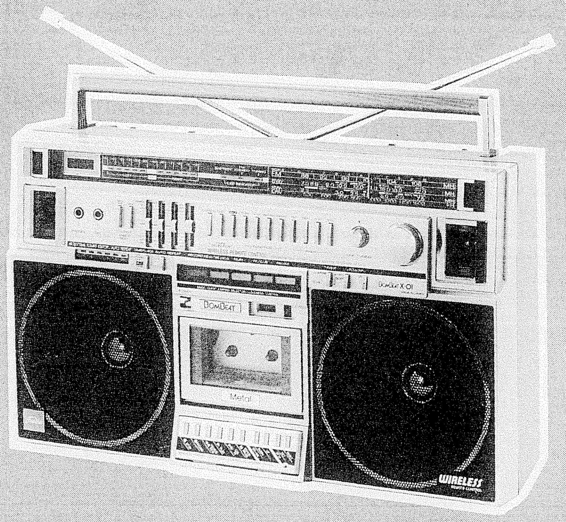
SERVICE DATA
FILE NO. 110-279

TOSHIBA
STEREO RADIO CASSETTE RECORDER
RT-S933



SPECIFICATIONS

Cassette Tape Used:	Normal: C-30, C-60, C-90, C-120 Chrome: C-45, C-60, C-90 Metal: C-46, C-60, C-90
Tape Speed:	4.8 cm/sec.
Track System:	Four-track two-channel stereophonic
Recording System:	AC bias (85 kHz)
Erasing System:	AC erasing
Frequency Response:	Normal: 50 Hz to 12 kHz Metal: 50 Hz to 15 kHz
Receiving Frequency:	FM: 88 MHz to 108 MHz SW2: 7.5 MHz to 22 MHz SW1: 2.3 MHz to 7.5 MHz MW: 525 kHz to 1605 kHz
Intermediate Frequency:	FM: 10.7 MHz MW, SW: 455 kHz
Antenna:	FM, SW: telescopic antennas MW: ferrite-core antenna
Speakers:	Woofer (180mm dia. dinamic) x 2 Tweeter (40mm dia. dinamic) x 2

Jacks:	[MIC] jack x 2, Impedance 200 ohm to 2k ohm, 3.5mm [MIXING MIC] jack x 1, impedance 200 ohm to 2k ohm, φ6.3mm [AUX/PHONO] jack x 2, Impedance 20 k ohm, pintype [LINE OUT] jack x 2, Impedance 4.7k ohm, pintype [SPEAKER] jack x 2, Impedance 3.2 ohm to 8 ohm, φ3.5mm [PHONES] jack headphone, φ6.3mm
Power Supply:	AC 110 to 127V, 220 to 240V, 50/60 Hz DC 13.5V (SUM-1 "D" size x 9)
Power Consumption:	25W
Dimensions:	520(W) x 307(H) x 172(D) mm
Weight:	6.5 kg (without batteries)

Specifications are subject to change without notice.

VF

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POWER SUPPLY

- **Batteries (optional)**

Open the battery cover, insert 9 dry cells (SUM-1 "D" size), observing correct polarity (+, –) indication.

- **To Check the Condition of the Batteries**

When the set is turned on, the [BATTRY] indicator 7 should light up. If it fails to light, the batteries have run down, and all 9 batteries must be replaced with fresh SUM-1 "D" size batteries.

- **AC POWER**

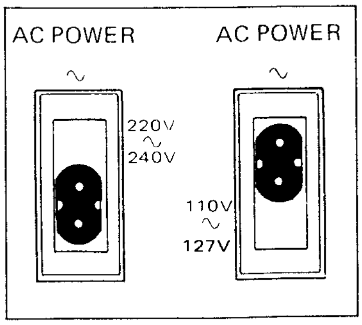
This unit operates on either household current of 110-127V AC. The [AC POWER] socket 46 located on the side of the set is pre-set at 220-240V AC. Connect one end of the power cord to [AC POWER] socket 46 and the other end to an AC outlet.

Precautions on power source changeover

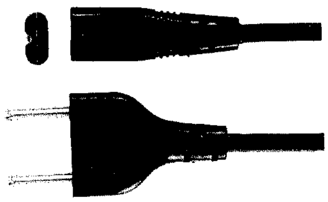
Prior to changing over the [AC POWER] socket 46, confirm the local voltage of the current to which this cassette recorder is to be connected. Should it be inadvertently connected to the wrong voltage, trouble may result.

To operate the set on 110-127V AC

Slide the cover of the [AC POWER] socket 46, and connect one end of the power cord to [AC POWER] socket 46 and other end to an AC outlet.



POWER CORD



1. OPERATING CONTROLS

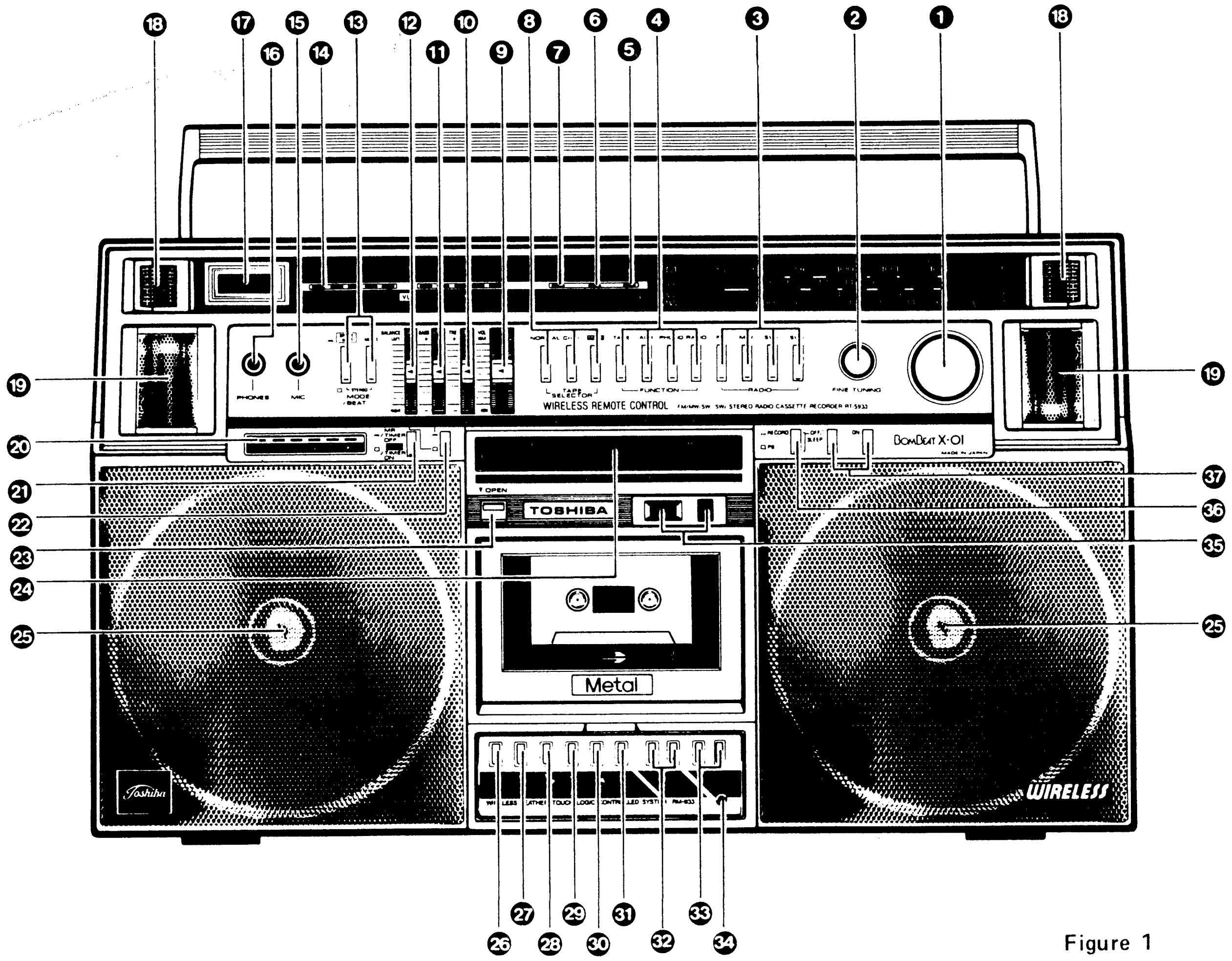


Figure 1

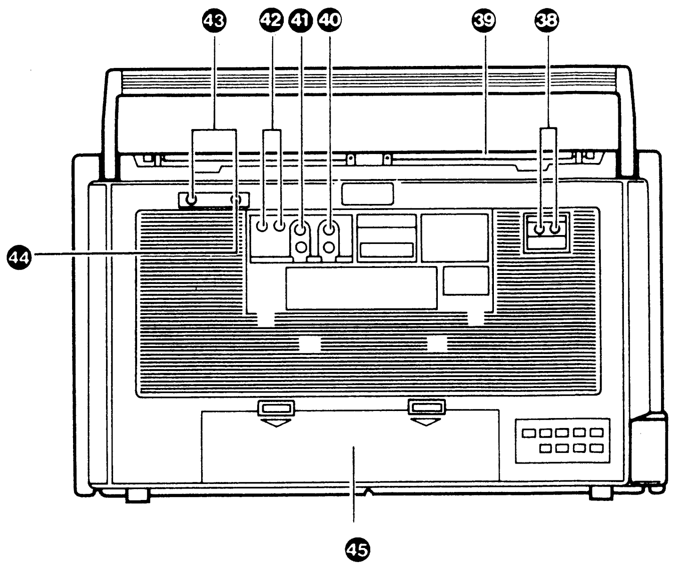


Figure 2

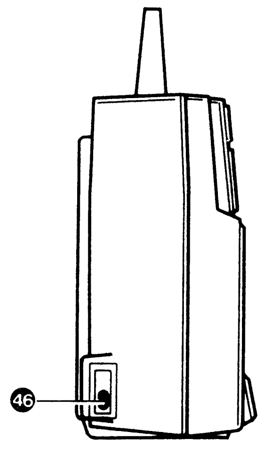


Figure 3

❶ Tuning knob
❷ [FINE TUNING] Control
❸ [RADIO] Selector: FM/MW/SW$_1$/SW$_2$
❹ [FUNCTION] Selector:
TAPE/AUX/PHONO/RADIO
❺ [TUNING] Indicator
❻ [FM STEREO] Indicator
❼ [BATTERY] Indicator
❽ [TAPE SELECTOR] Selector: NORMAL/CrO$_2$/ Metal
❾ [VOLUME] Control
❿ TREBLE Control
⓫ Bass Control
⓬ [BALANCE] Control
⓭ [MODE/BEAT] Selector: MONO/STEREO/SPACE WIDE
⓮ Level Meters
⓯ [MIC] Jack

⓰ [PHONES] Jack
⓱ Infrared Sensor Window
⓲ Built-in Microphones
⓳ Tweeter Speakers
⓴ MQJS/TIME COUNT EDITOR/AUTO REPEAT Indicators
㉑ [TIMER/MQJS] Button:
▭MR/TIMER OFF – □ MQJS /TIMER ON
㉒ [AUTO REPEAT] Buttons: ▭ / □
㉓ [▼OPEN] Button
㉔ Tape Transport Mode Indicators
㉕ Woofer Speakers
㉖ [■STOP] Button
㉗ [●RECORD] Button
㉘ [◀◀REW/REVIEW] Button
㉙ [▶PLAY] Button
㉚ [▶▶FF/CUE] Button

㉛ [II PAUSE/EDITOR] Button
㉜ [VOLUME] Buttons: UP/DOWN
㉝ [MQJS] (AUTO REPEAT) Buttons: SET/RESET
㉞ Remote Control Button Indicator
㉟ Tape Counter/Counter Reset Button
㊱ [TIMER] Switch: ▭RECORD/□PB
㊲ [POWER] Switch: ▭ON–□OFF/SLEEP

Note: In the □ OFF/SLEEP position the mains power will still be supplied. Therefore, when not in use unplug the cord from the socket.

㊳ [SPEAKER] Jacks
㊴ Telescopic Antennas
㊵ [LINE OUT] Jacks
㊶ [AUX/PHONO] Jacks
㊷ [MIC] Jacks
㊸ External FM Antenna Terminal
㊹ [PHONO ⏚] Terminal
㊺ Batteries Compartment
㊻ [AC POWER] Socket

2. DISASSEMBLY INSTRUCTIONS

- **FRONT CABINET REMOVAL**

1. Remove six knobs Ⓐ from the front of cabinet. (Figure 4)
2. Remove seven screws Ⓑ (3φ x 35 mm) from the rear of cabinet. (Figure 5)
   Open the Cassette Lid by pressing the open button.
3. Remove the connectors from the speaker terminals and the front cabinet.

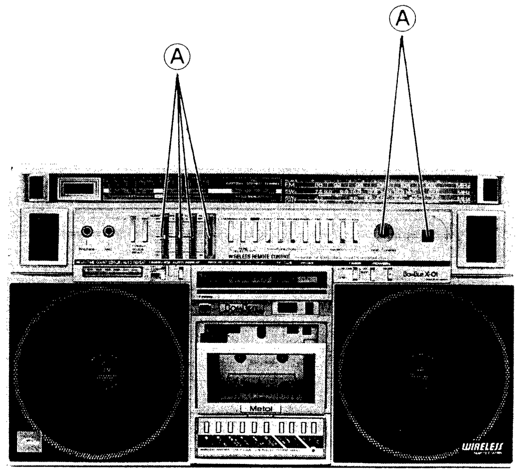


Figure 4

- **MECHANISM ASSEMBLY REMOVAL**

1. Remove six screws Ⓒ (3φ x 35 mm), Ⓓ (3φ x 12 mm) and Ⓔ (3φ x 8 mm). (Figure 6)
2. Remove three connectors from the P.C. Board and the mechanism assembly can be removed.

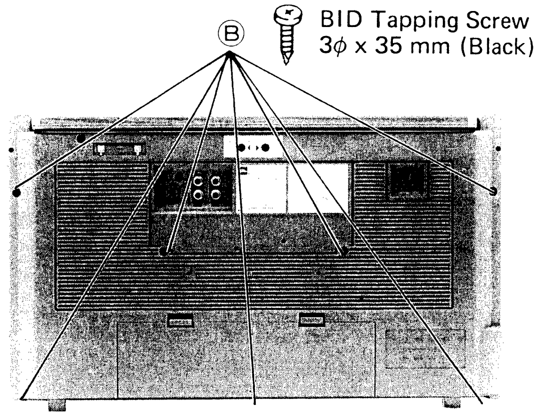

Ⓑ
BID Tapping Screw
3φ x 35 mm (Black)

Figure 5

- **POWER P.C. BOARD REMOVAL**

1. Remove four screws Ⓕ (4φ x 12 mm) and the power P.C. Board can be removed from the back cabinet. (Figure 6).

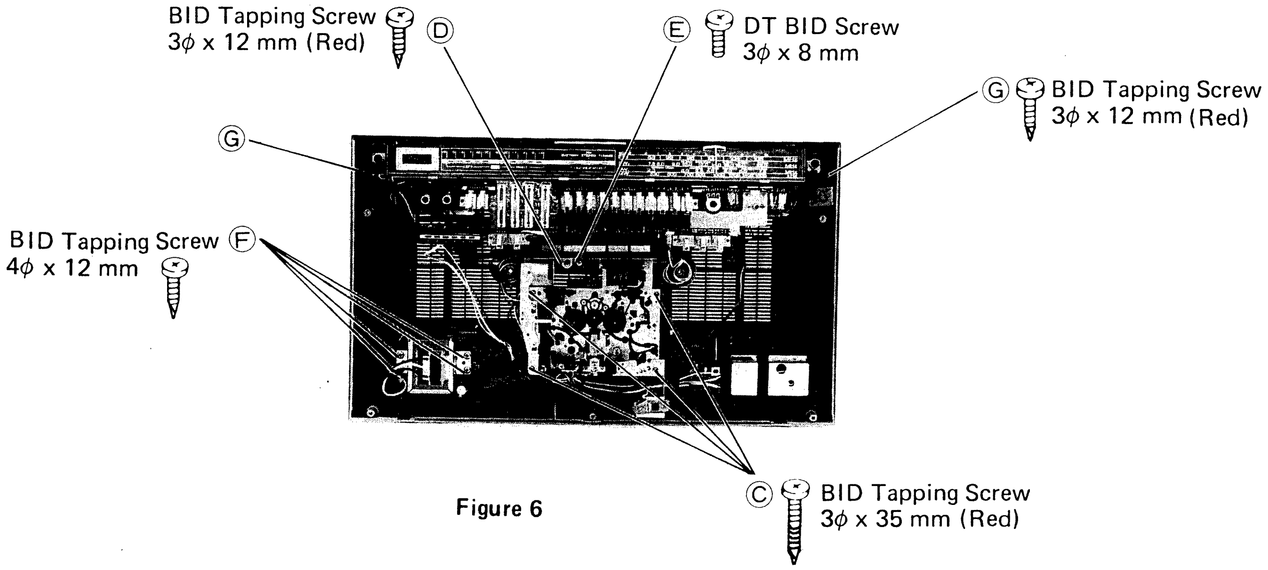

BID Tapping Screw
3φ x 12 mm (Red)
Ⓓ
Ⓔ
DT BID Screw
3φ x 8 mm
Ⓖ
BID Tapping Screw
3φ x 12 mm (Red)
Ⓖ
BID Tapping Screw Ⓕ
4φ x 12 mm
Ⓒ
BID Tapping Screw
3φ x 35 mm (Red)

Figure 6

- **MAIN, CONTROL AND TONE P.C. BOARDS REMOVAL**

1. Remove one screw Ⓔ. (Figure 6)
2. Remove two screws Ⓖ (3φ x 12 mm) and pull out the P.C. Boards frontward. (Figure 6)

- **CONTROL P.C. BOARD REMOVAL**

1. Remove four screws Ⓗ (3φ x 6mm), and restore two hooks Ⓛ, and disconnect the two connectors. (Figure 7)
2. Separate the control P.C. Board from the Main P.C. Board.

- **TONE P.C. BOARD REMOVAL**

1. Removal two screws Ⓘ (3φ x 6 mm) and the tone P.C. Board can be removed. (Figure 8)

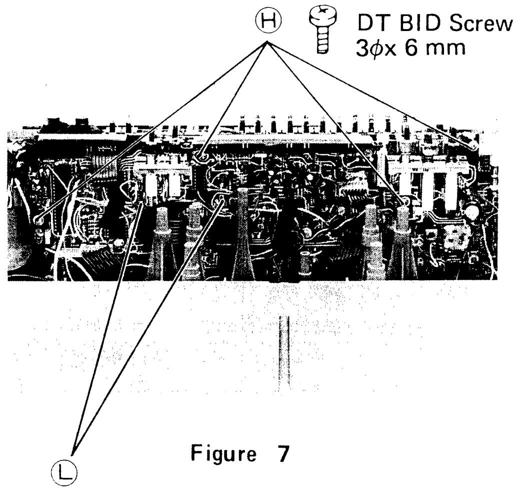

Ⓗ
DT BID Screw
3φx 6 mm
Ⓛ

Figure 7

- **REMOTE CONTROL RECEIVER P.C. BOARD REMOVAL**

1. Remove two screws Ⓙ (3φ x 10 mm). (Figure 8)
2. Remove the screw Ⓒ (3φ x 35 mm) to detach the mounting bracket for the infrared receiving P.C. Board from the mechanism assembly.
3. Furthermore, remove the connector from the control P.C. Board, and the remote control receiver P.C. Board can be removed.

- **REMOTE CONTROL TRANSMITTER REPAIRING**

1. Remove the remote control transmitter from the unit.
2. Push the function buttons and confirm the transmitter operates correctly.
3. When repairing the P.C. Board, proceed repairing after removing two screws Ⓚ (2.6φ x 8 mm) to detach the rear cover of the transmitter. (Figure 9)

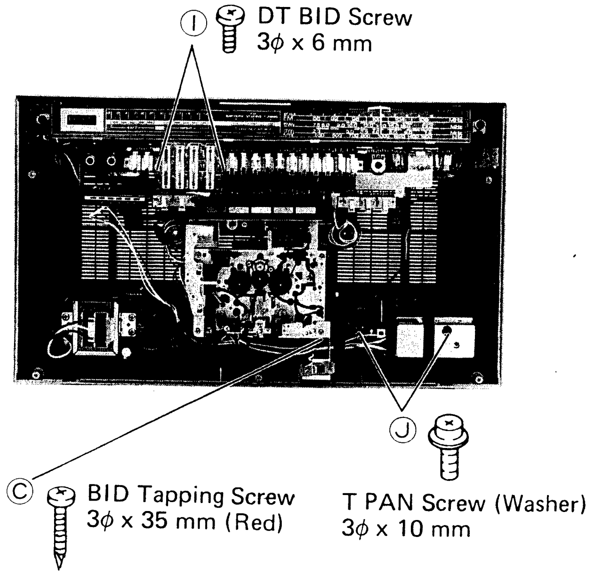

Ⓘ
DT BID Screw
3φ x 6 mm
Ⓙ
Ⓒ
BID Tapping Screw
3φ x 35 mm (Red)
T PAN Screw (Washer)
3φ x 10 mm

Figure 8

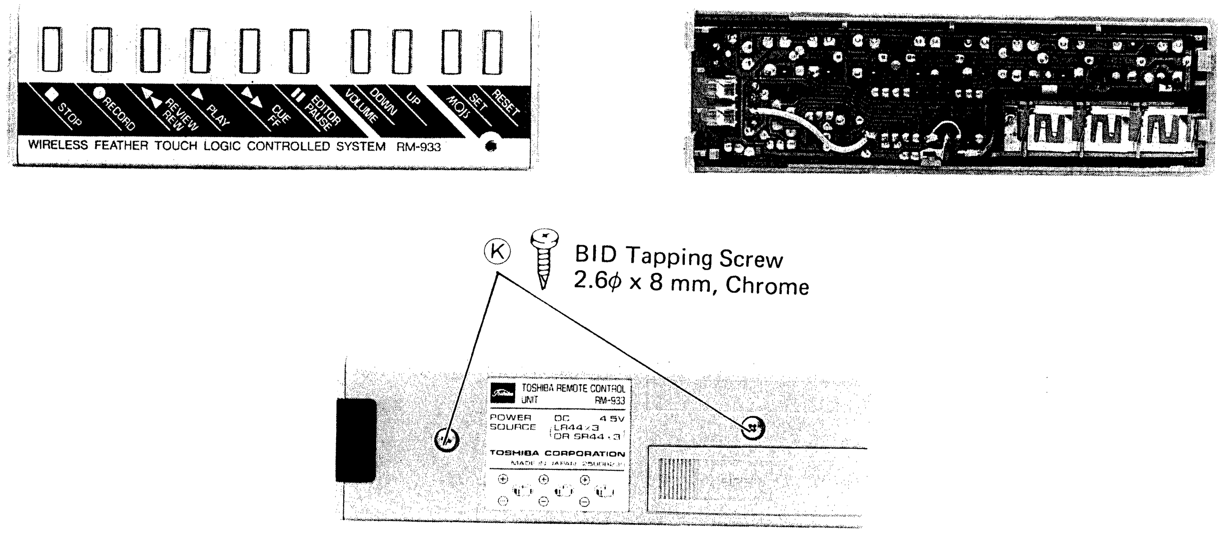

STOP
RECORD
REVIEW
PLAY
CUE FF
EDITOR PAUSE
VOLUME
DOWN
UP
MON
SET
RESET
WIRELESS FEATHER TOUCH LOGIC CONTROLLED SYSTEM RM-933
Ⓚ
BID Tapping Screw
2.6φ x 8 mm, Chrome
TOSHIBA REMOTE CONTROL UNIT RM-933
POWER SOURCE DC 4.5V LR44 x 3 OR SR44 x 3
TOSHIBA CORPORATION

Figure 9

3. MOTOR PULLEY REPLACEMENT

- **MOTOR PULLEY INSTALLATION**

When installing the pulley to the motor, keep the clearance (2 mm) as shown below. Apply a little adhesive, LOCKTITE 601 (Code No. 22 964 085) into the head of the pulley to fix the pulley with the motor.

Note: Never apply a drop of adhesive on the part Ⓐ not to fix the motor.

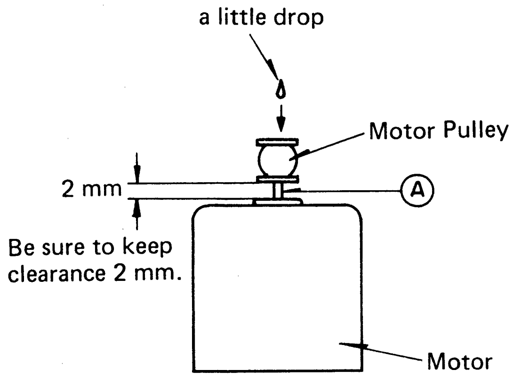

a little drop
Motor Pulley
2 mm
Ⓐ
Be sure to keep clearance 2 mm.
Motor

Figure 10

4. HANDLE REMOVAL

- **HANDLE HOLDER REPLACEMENT**

To replace the handle holder, detach the handle axis in the direction of Ⓐ, turn it in Ⓑ and pull it out in Ⓒ to remove the handle holder.

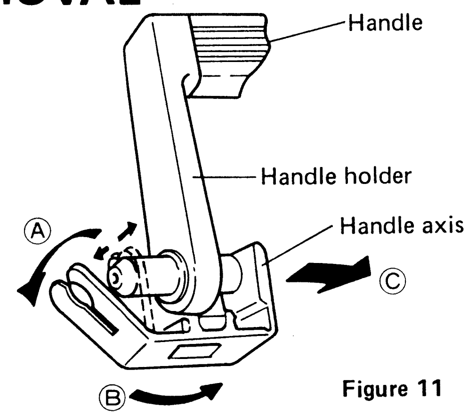
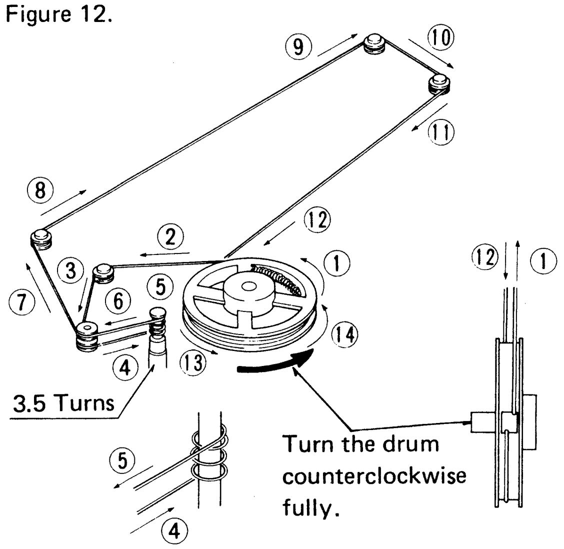

Handle
Handle holder
Handle axis
Ⓐ
Ⓑ
Ⓒ

Figure 11

5. DIAL CORD RESTRINGING

- **DIAL CORD RESTRINGING**

1. Thread the dial cord through the hole of the drum shown in Figure 14.
2. Wind the dial cord in numerical order shown in Figure 12.
3. Hook the spring on the drum shown in Figure 14.
4. After restringing the dial cord, turn the drum counterclockwise fully and then set the pointer at "0" point on the scale.


⑨
⑩
⑪
⑧
⑫
②
①
⑦
③
⑥
⑤
⑭
④
⑬
⑫
①
3.5 Turns
⑤
④
Turn the drum counterclockwise fully.

Note: Wind the cord on the tuning shaft with care not to turn the unit over.

Figure 12

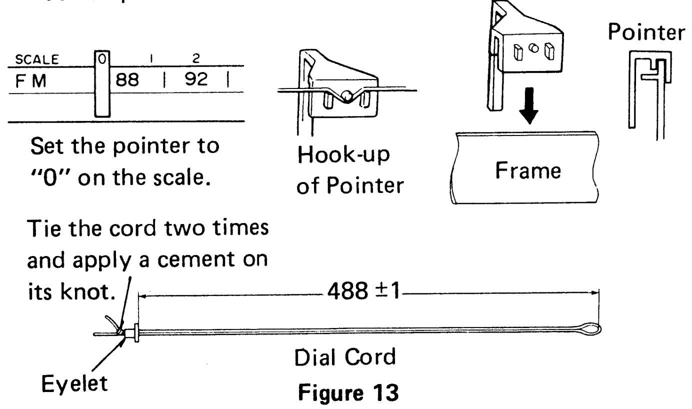

SCALE
FM
1 2
88 92
Set the pointer to "0" on the scale.
Hook-up of Pointer
Pointer
Frame
Tie the cord two times and apply a cement on its knot.
488 ±1
Eyelet
Dial Cord

Figure 13

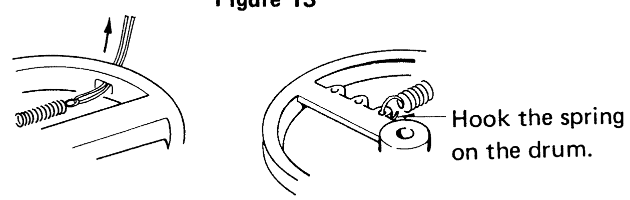

Hook the spring on the drum.

Figure 14

6. BLOCK DIAGRAM

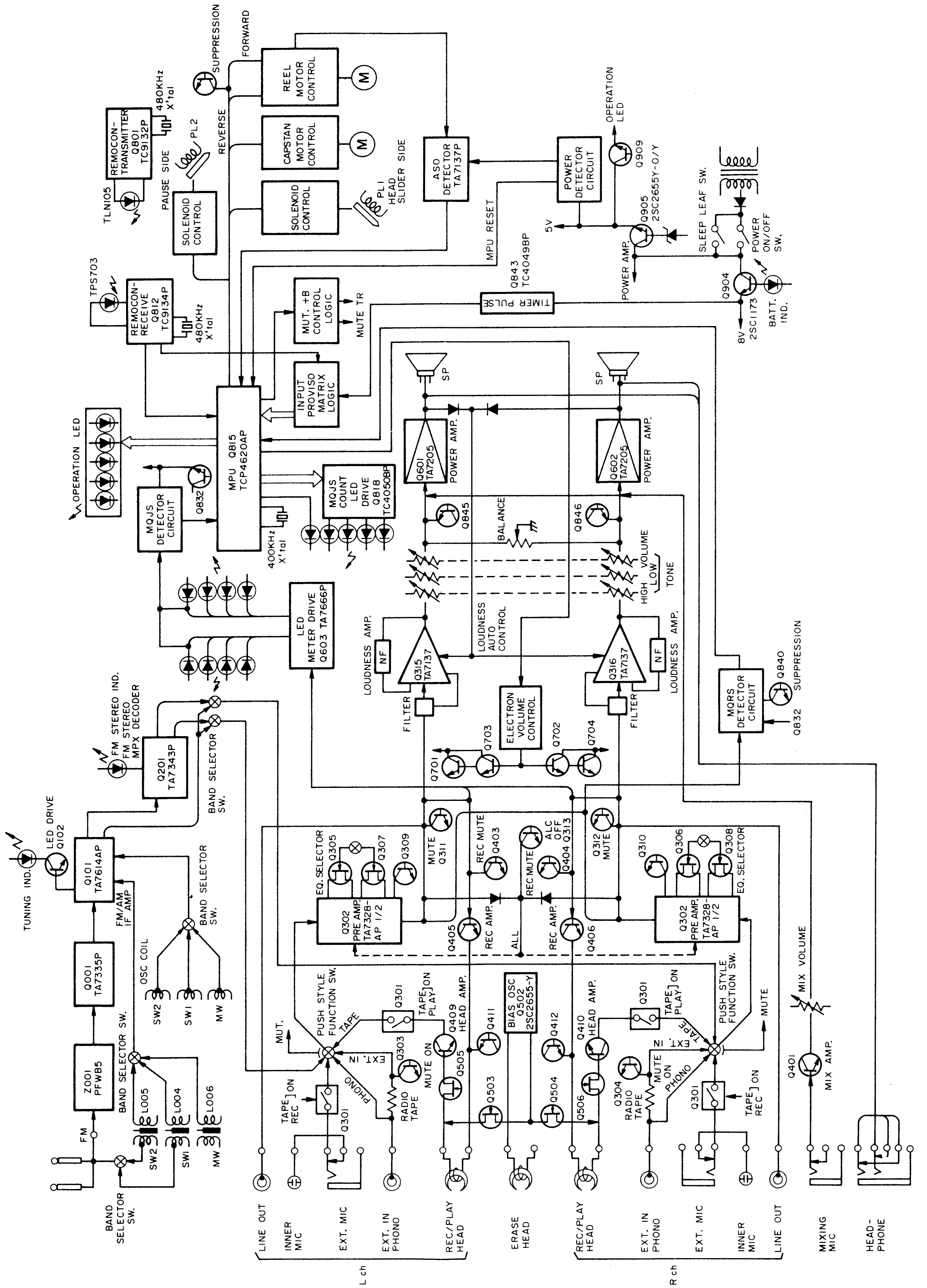

REMOCON-TRANSMITTER Q801 TC9132P
480KHz X'tal
SUPPRESSION
FORWARD
REVERSE
REEL MOTOR CONTROL
CAPSTAN MOTOR CONTROL
SOLENOID CONTROL
PAUSE SIDE
PL2
PL1 HEAD SLIDER SIDE
TLN105
ASO DETECTOR TA7137P
POWER DETECTOR CIRCUIT
OPERATION LED
Q909
Q905 2SC2655Y-O/Y
SLEEP LEAF SW.
POWER ON/OFF SW.
POWER AMP.
MPU RESET
5V
Q843 TC4049BP
TIMER PULSE
TPS703
REMOCON-RECEIVE Q812 TC9134P
480KHz X'tal
MUT +B CONTROL LOGIC
MUTE TR
INPUT PROVISO MATRIX LOGIC
Q904 2SC1173
8V
BATT. IND.
OPERATION LED
MPU Q815 TCP4620AP
MQJS DETECTOR CIRCUIT
Q832
MQJS COUNT LED DRIVE Q818 TC4050BP
400KHz X'tal
SP
Q601 TA7205 POWER AMP.
Q602 TA7205 POWER AMP.
Q845
Q846
BALANCE
HIGH VOLUME LOW TONE
LED METER DRIVE Q603 TA7666P
LOUDNESS AMP.
NF
Q315 TA7137
LOUDNESS AUTO CONTROL
Q316 TA7137
FILTER
ELECTRON VOLUME CONTROL
Q701
Q703
Q702
Q704
MORS DETECTOR CIRCUIT
Q840 SUPPRESSION
Q832
FM STEREO IND.
FM STEREO MPX DECODER Q201 TA7343P
BAND SELECTOR SW.
LED DRIVE Q102
TUNING IND.
Q101 TA7614AP
FM/AM IF AMP.
Q001 TA7335P
Z001 PFWB5
FM
OSC COIL
SW2 SW1 MW
L005 L004 L006
EQ. SELECTOR Q305
Q307
Q309
MUTE Q311
REC MUTE Q403
ALC Q404 Q313
Q312 MUTE
Q310
Q306
Q308 EQ. SELECTOR
Q302 PRE AMP TA7328-AP 1/2
Q405 REC AMP.
ALL
REC AMP. Q406
PUSH STYLE FUNCTION SW.
Q301
TAPE ON PLAY
Q409 HEAD AMP.
Q411
BIAS OSC Q502 2SC2655-Y
Q412
Q410 HEAD AMP.
MUT.
EXT. IN
PHONO
RADIO TAPE
MUTE ON
Q303
Q505
Q503
Q504
Q506
Q304
Q401
MIX AMP.
MIX VOLUME
MUTE
TAPE REC ON
BAND SELECTOR SW.
LINE OUT
INNER MIC
EXT. MIC
EXT. IN PHONO
REC/PLAY HEAD
ERASE HEAD
L ch
R ch
MIXING MIC
HEAD-PHONE

Figure 15

7. ADJUSTMENTS INSTRUCTIONS

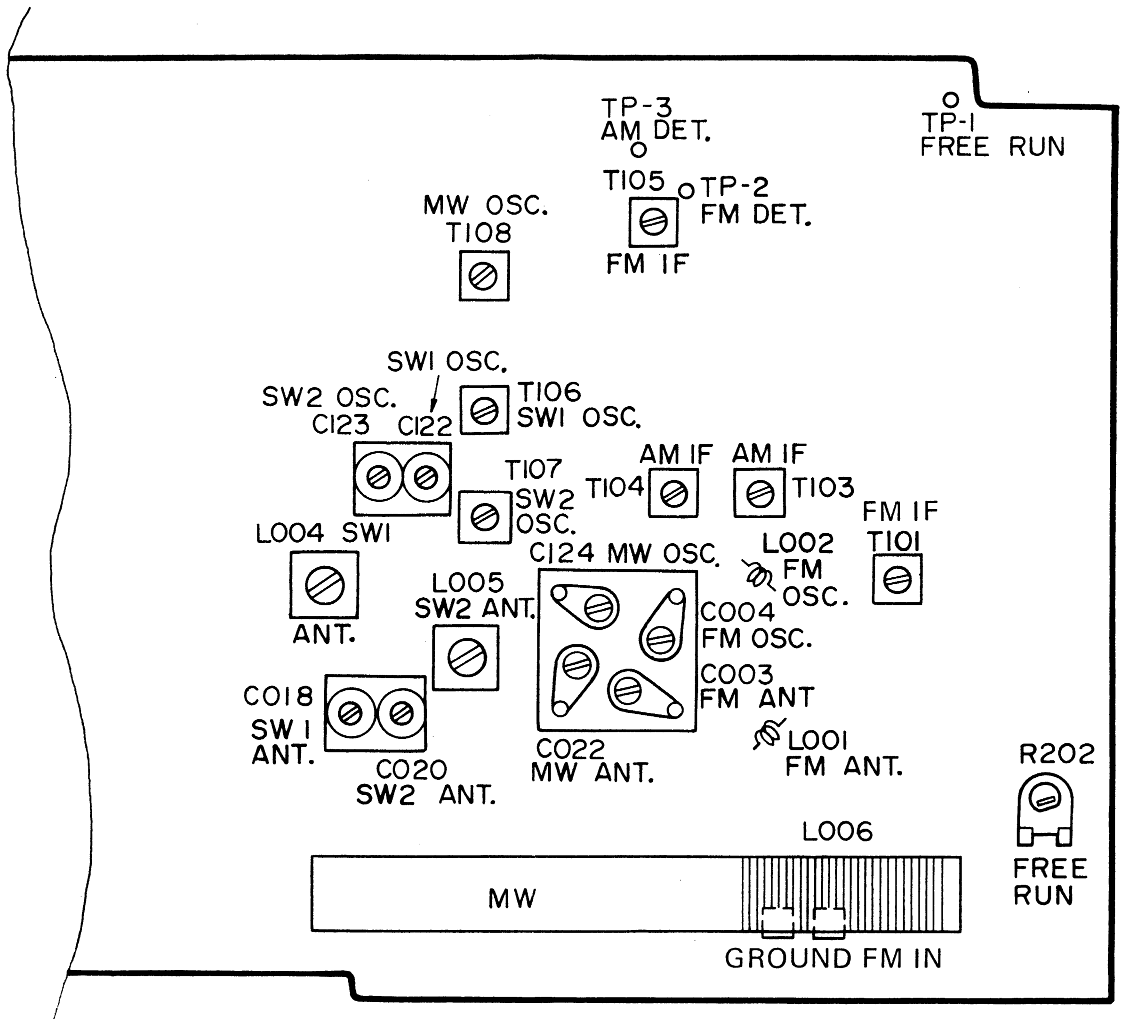

TP-3
AM DET.
TP-1
FREE RUN
T105
TP-2
FM DET.
MW OSC.
T108
FM IF
SW1 OSC.
SW2 OSC.
C123
C122
T106
SW1 OSC.
AM IF
AM IF
T107
SW2 OSC.
T104
T103
FM IF
T101
L004 SW1
ANT.
C124 MW OSC.
L002
FM OSC.
L005
SW2 ANT.
C004
FM OSC.
C003
FM ANT
C018
SW 1
ANT.
C020
SW2 ANT.
C022
MW ANT.
L001
FM ANT.
R202
FREE
RUN
L006
MW
GROUND FM IN

Figure 16

TEST EQUIPMENT

1. Signal generator with a frequency range of at least from 455 kHz to 23 MHz AM.
2. Oscilloscope with a wide range amplifier of approximately 100 kHz.
3. Test loop — a coil of any size wire, one turn or more. (MW)
4. A 30-ohm dummy antenna. (SW1, SW2)
5. VTVM.

AM ALIGNMENT

1. Turn on the AM signal generator and the VTVM allowing a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
5. Set volume control at mid-position.
6. Proceed as outlined in the IF-MW, SW1 and SW2 ALIGNMENT CHART.

MW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	455 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	T103, T104	Adjust for maximum indication.
MW	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil T108	Adjust for maximum indication.
	3	1650 kHz	Tuning Gang Fully clockwise (Highest Frequency)	OSC. Trim C124	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	Ant. Coil L006	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C022	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

SW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
SW1	1	2.25 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil T106	Adjust for maximum indication.
	2	7.7 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C122	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	3 MHz	Tune to Signal.	Ant. Coil L004	Adjust for maximum indication.
	5	7 MHz	Tune to Signal.	Ant. Trim. C018	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			
SW2	1	7.35 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil T107	Adjust for maximum indication.
	2	22.5 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C123	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	9 MHz	Tune to Signal.	Ant. Coil L005	Adjust for maximum indication.
	5	20 MHz	Tune to Signal.	Ant. Trim. C020	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			

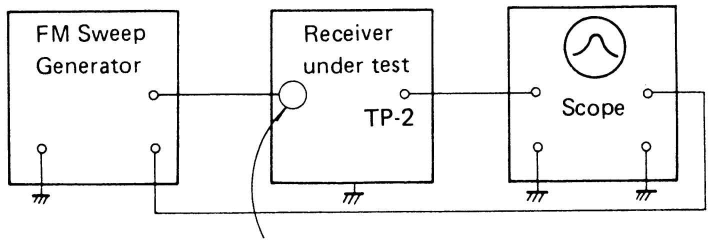
FM-IF ALIGNMENT

1. Set the select switch to FM position.
2. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
3. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
4. Connect the oscilloscope vertical input directly to the test point TP-2 FM and connect the shielded lead to the GND.
5. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
6. Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T101 T105	Turn the coil L105 fully counterclockwise to obtain a single peak. Fig. 19. Adjust coil L101 in order until the best single peak is obtained. Finally turn the coil L105 to obtain S curve. See Figure 20.

IF Sweep Test


FM Sweep Generator
Receiver under test
TP-2
Scope

3-turn Loop Antenna located near the L001 or L002.

Figure 17

Generator Coupling Hook-up

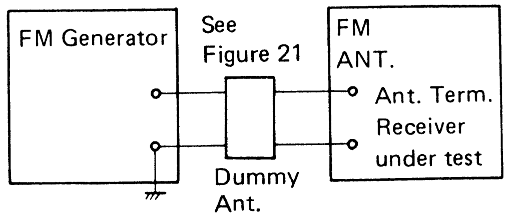

FM Generator
See Figure 21
FM ANT.
Ant. Term.
Receiver under test
Dummy Ant.

Figure 18

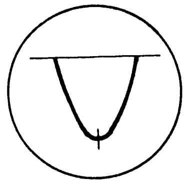


Figure 19

S Curve

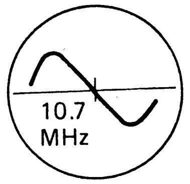


Figure 20

FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set the volume control to mid-position.
5. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
6. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.3 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication
2	109 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C004	Adjust for maximum output indication
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication
5	106 MHz		Ant. Trim. C003	
6	Repeat steps 4 and 5 as required.			

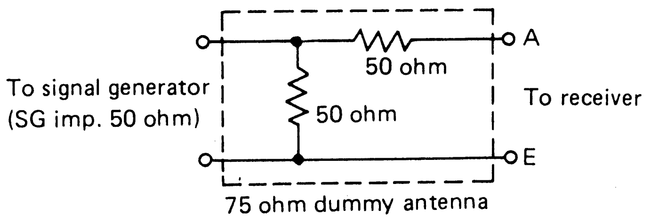

A
50 ohm
To signal generator (SG imp. 50 ohm)
50 ohm
To receiver
E
75 ohm dummy antenna

Figure 21

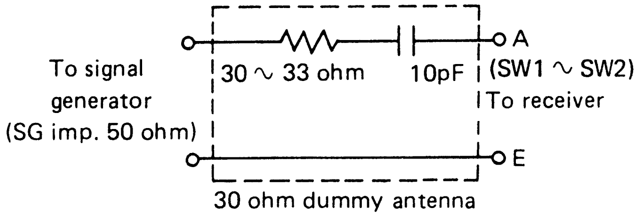

A
To signal generator (SG imp. 50 ohm)
30 ∿ 33 ohm
10pF
(SW1 ∿ SW2)
To receiver
E
30 ohm dummy antenna

Figure 22

FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 38 kHz ±75 Hz.

RECORD/PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a philips screwdriver to maintain the maximum output voltage.

Caution in R/P Head Replacement (Figure 23)
Losseness of the R/P head mounting hole and screw may cause clearance between the head and tape as shown in figure (A). In this case, MQJS function does not operate correctly. Therefore, adjust and fasten the screw by pushing the R/P head in the arrow direction as shown in figure (B). Do not proceed to adjsut the head as shown in figure (C).

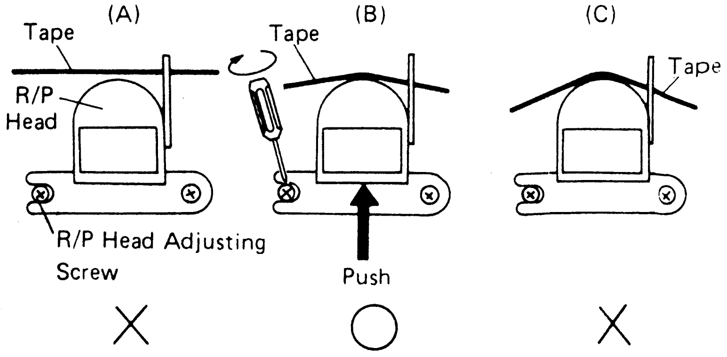
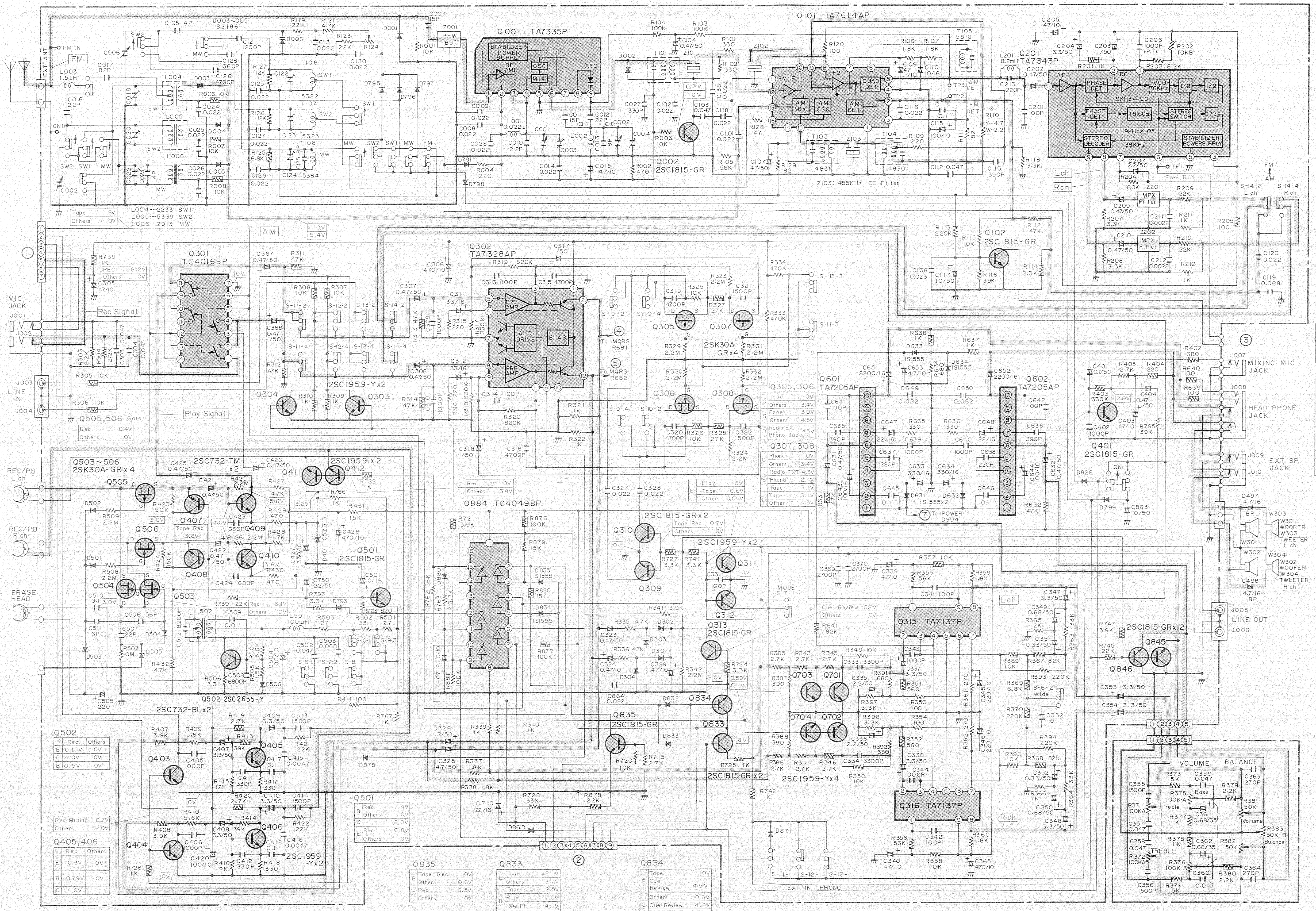

(A)
Tape
R/P Head
R/P Head Adjusting Screw
X
(B)
Tape
Push
○
(C)
Tape
X

Figure 23

8. SCHEMATIC DIAGRAM (MAIN)


EXT ANT
FM IN
FM
L003 1.5μH
GND
SW2 SW1 MW
L004---2233 SW1
L005---5339 SW2
L006---2913 MW
AM
Q001 TA7335P
STABILIZER POWER SUPPLY
RF AMP
OSC
MIX
AFC
Q002 2SC1815-GR
Q101 TA7614AP
FM IF
IF2
QUAD DET
AM MIX
AM OSC
AM DET
Z103: 455KHz CE Filter
Q201 TA7343P
AF
PHASE DET
DC
VCO 76KHz
19KHz∠-90°
19KHz∠0°
TRIGGER
STEREO SWITCH
STEREO DECODER
38KHz
STABILIZER POWERSUPPLY
Free Run
MPX Filter
Lch
Rch
Q102 2SC1815-GR
S-14-2 L ch
S-14-4 R ch
FM
AM
Q301 TC4016BP
Rec Signal
Play Signal
MIC JACK
J001
J002
LINE IN
J003
J004
Q302 TA7328AP
PRE AMP
ALC DRIVE
BIAS
To MQRS R681
To MQRS R682
Q304
Q303
2SC1959-Yx2
Q305
Q307
2SK30A -GRx4
Q306
Q308
Q601 TA7205AP
Q602 TA7205AP
To POWER D904
Q401 2SC1815-GR
J007 MIXING MIC JACK
J008 HEAD PHONE JACK
J009 J010 EXT SP JACK
W301 WOOFER
W303 TWEETER L ch
W302 WOOFER
W304 TWEETER R ch
J005 LINE OUT J006
REC/PB L ch
REC/PB R ch
ERASE HEAD
Q503~506 2SK30A-GR x 4
2SC732-TM x2
2SC1959 x 2
Q411 Q412
Q505
Q506
Q504
Q407
Q409
Q410
Q408
Q501 2SC1815-GR
Q503
Q502 2SC2655-Y
Q884 TC4049BP
2SC1815-GRx2
Q310
Q309
2SC1959-Yx2
Q311
Q312
Q313 2SC1815-GR
MODE S-7-1
Q315 TA7137P
Q316 TA7137P
Q703 Q701
Q704 Q702
2SC1959-Yx4
2SC1815-GRx2
Q845
Q846
VOLUME BALANCE
Treble
Bass
Volume
Balance
TREBLE
Q835 2SC1815-GR
Q833
Q834
2SC1815-GR x2
2SC732-BLx2
Q405
Q403
Q406
Q404
2SC1959 -Yx2
EXT IN PHONO

Q505,506 Gate

Rec	-0.4V
Others	0V

Tape	6V
Others	0V

Q305,306

G	Tape	0V
	Others	3.4V
S	Tape	3.0V
	Others	4.5V
D	Radio EXT Phono Tape	4.5V

Q307, 308

G	Phono	0V
	Others	3.4V
S	Radio EXT	4.3V
	Phono	2.4V
	Tape	3.1V
D	Tape	3.1V
	Other	4.3V

Q502

	Rec	Others
E	0.15V	0V
C	4.0V	0V
B	0.5V	0V

Q405,406

	Rec	Others
E	0.3V	0V
B	0.79V	0V
C	4.0V	

Q501

B	Rec	7.4V
	Others	0.6V
C		8.0V
E	Rec	6.8V
	Others	0V

Q835

B	Tape Rec	0V
	Others	0.6V
C	Rec	6.5V
	Others	0V

Q833

E	Tape	2.1V
	Others	3.7V
	Tape	2.5V
B	Play	0V
	Rew FF	4.1V
	Others	0.55V

Q834

B	Tape	0V
	Cue Review	4.5V
	Others	0.6V
C	Cue Review	4.2V
	Others	0V

Q001

1	3.0V
	0V
2	3.8V
	0V
3	3.8V
4	3.8V/0V
5	0V
6	3.8V
	0V
7	3.6V
	0V
8	0V
9	2.5V
	2.5V

Q101 (FM / AM)

1	0V	6.6V	16
2	0.05V	6.8V	
	0.25V	6.6V	15
3	6.0V	6.8V	
	6.1V	6.6V	14
4	0V	6.8V	
		0V	13
5	3.4V	2.0V	
	3.5V	0.8V	12
6	6.0V	0V	
	6.0V	0V	11
7	0.01V	1.4V	
	0.2V	0.8V/0V	10
8	1.15V	1.15V	9
	1.15V	1.15V	

Q201

1	2.8V	3.0V	9
	0V	0V	
2	3.6V	3.0V	8
	0V	0V	
3	5.1V	4.3V	7
	0V	0V	
4	4.3V	LED Lighting 0.84V	6
	0V		
5	0V	6.2V	

Q302

1	8.0V	3.7V	12
2	3.7V	4.5V	11
3	4.5V	0V	10
4	1.2V	1.2V	9
5	0V	0V	8
6	0.5V	0V	7

Q305, Q306

G	Tape	0V
	Others	3.4V
S	Tape	3.0V
	Others	4.5V
D	Radio, EXT Phono, Tape	4.5V

Q315, Q316

1	2.0V		
2	0.6V	5.8V	9
3	0.02V	2.6V	8
4	0.02V	0.64V	7
5	0V	0.3V	6

Q601, Q602

1	13.5V	6.7V	10
2	12V	0V	9
3	3.8V	1.2V	8
4	8.0V	3.3V	7
5	1.4V	2.8V	6

Q884

1	Tape	8.0V	—		16
	Rec	0V	Rec	0V	15
2	Tape	8.0V	Others	7.2V	
3	Rec	6.6V	Rec	6.8V	14
4	Rec	6.2V	Others	0V	
	Others	0V	—		13
5	Tape	7.8V	Rec	7.8V	12
	Rec	0V	Others	0V	
	Others	6.7V	Rec	0V	11
6	Muting	6.4V	Others	7.2V	
7	Rec Muting	1.5V	—		10
8		0V	Tape	8.0V	9

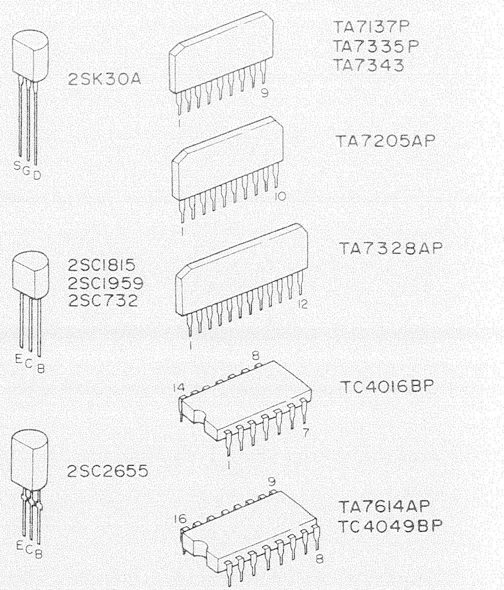
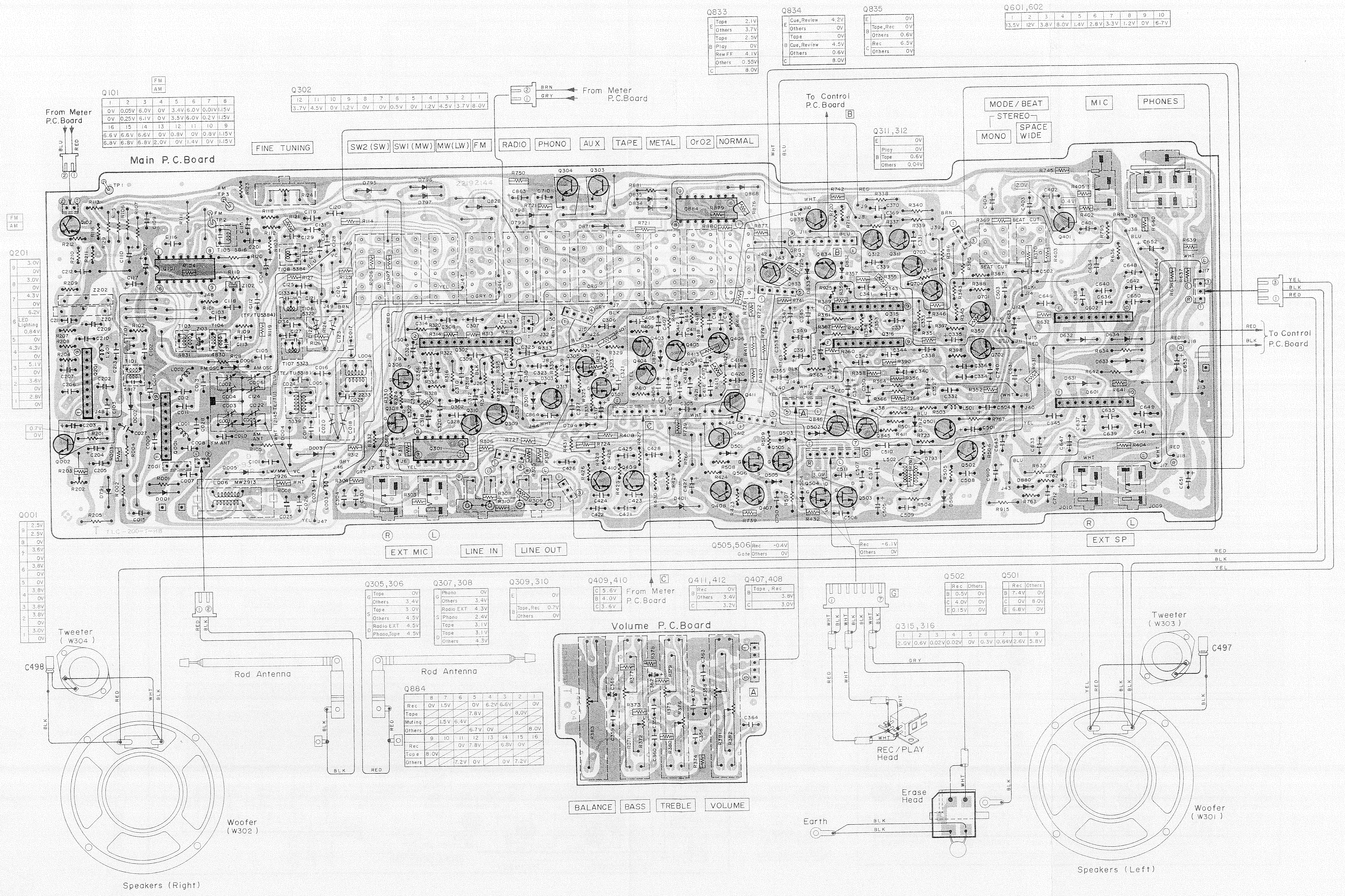

2SK30A
S G D
TA7137P
TA7335P
TA7343
TA7205AP
TA7328AP
2SC1815
2SC1959
2SC732
E C B
TC4016BP
2SC2655
E C B
TA7614AP
TC4049BP
1
9
10
12
14
8
7
16

Figure 24

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

9. ELECTRICAL PARTS LOCATIONS (MAIN)


From Meter P.C.Board
BLU
RED
Main P.C.Board
FINE TUNING
SW2 (SW)
SW1 (MW)
MW(LW)
FM
RADIO
PHONO
AUX
TAPE
METAL
CrO2
NORMAL
From Meter P.C.Board
BRN
GRY
To Control P.C.Board
B
MODE/BEAT
STEREO
MONO
SPACE WIDE
MIC
PHONES
To Control P.C.Board
YEL
BLK
RED
TP1
TP2
TP3
AM
FM
EXT MIC
LINE IN
LINE OUT
EXT SP
R
L
From Meter P.C.Board
C
Volume P.C.Board
A
G
BALANCE
BASS
TREBLE
VOLUME
Rod Antenna
Rod Antenna
Tweeter (W304)
C498
Woofer (W302)
Speakers (Right)
Tweeter (W303)
C497
Woofer (W301)
Speakers (Left)
REC/PLAY Head
Erase Head
Earth
WHT
BLK
GRY
TLC-200-7-RB

Q833

E	Tape	2.1V
	Others	3.7V
B	Tape	2.5V
	Play	0V
	Rew FF	4.1V
	Others	0.55V
C		8.0V

Q834

E	Cue, Review	4.2V
	Others	0V
B	Tape	0V
	Cue, Review	4.5V
	Others	0.6V
C		8.0V

Q835

E		0V
B	Tape, Rec	0V
	Others	0.6V
C	Rec	6.5V
	Others	0V

Q601, 602

1	2	3	4	5	6	7	8	9	10
13.5V	12V	3.8V	8.0V	1.4V	2.8V	3.3V	1.2V	0V	6.7V

Q101 (FM / AM)

1	2	3	4	5	6	7	8
0V	0.05V	6.0V	0V	3.4V	6.0V	0.01V	1.15V
0V	0.25V	6.1V	0V	3.5V	6.0V	0.2V	1.15V
16	15	14	13	12	11	10	9
6.6V	6.6V	6.6V	0V	0.8V	0V	0.8V	1.15V
6.8V	6.8V	6.8V	2.0V	0V	1.4V	0V	1.15V

Q302

12	11	10	9	8	7	6	5	4	3	2	1
3.7V	4.5V	0V	1.2V	0V	0V	0.5V	0V	1.2V	4.5V	3.7V	8.0V

Q201 (FM / AM)

9	3.0V 0V
8	3.0V 0V
7	4.3V 0V
6	6.2V LED Lighting 0.84V
5	0V
4	4.3V 0V
3	5.1V 0V
2	3.6V 0V
1	2.8V 0V

0.7V
0V

Q001

9	2.5V 2.5V
8	0V
7	3.6V 0V
6	3.8V 0V
5	0V
4	3.8V 0V
3	3.8V
2	3.8V 0V
1	3.0V 0V

Q311, 312

E		0V
B	Play	0V
	Tape	0.6V
	Others	0.04V

Q505, 506

Gate	Rec	-0.4V
	Others	0V

Rec	-6.1V
Others	0V

Q305, 306

G	Tape	0V
	Others	3.4V
S	Tape	3.0V
	Others	4.5V
D	Radio EXT	4.5V
	Phono, Tape	4.5V

Q307, 308

G	Phono	0V
	Others	3.4V
S	Radio EXT	4.3V
	Phono	2.4V
	Tape	3.1V
D	Tape	3.1V
	Others	4.3V

Q309, 310

E		0V
B	Tape, Rec	0.7V
	Others	0V

Q409, 410

C	5.6V
B	4.0V
C	3.6V

Q411, 412

B	Rec	0V
	Others	3.4V
C		3.2V

Q407, 408

B	Tape, Rec 3.8V
C	3.0V

Q502

	Rec	Others
B	0.5V	0V
C	4.0V	0V
E	0.15V	0V

Q501

	Rec	Others
B	7.4V	0V
C	0V	8.0V
E	6.8V	0V

Q315, 316

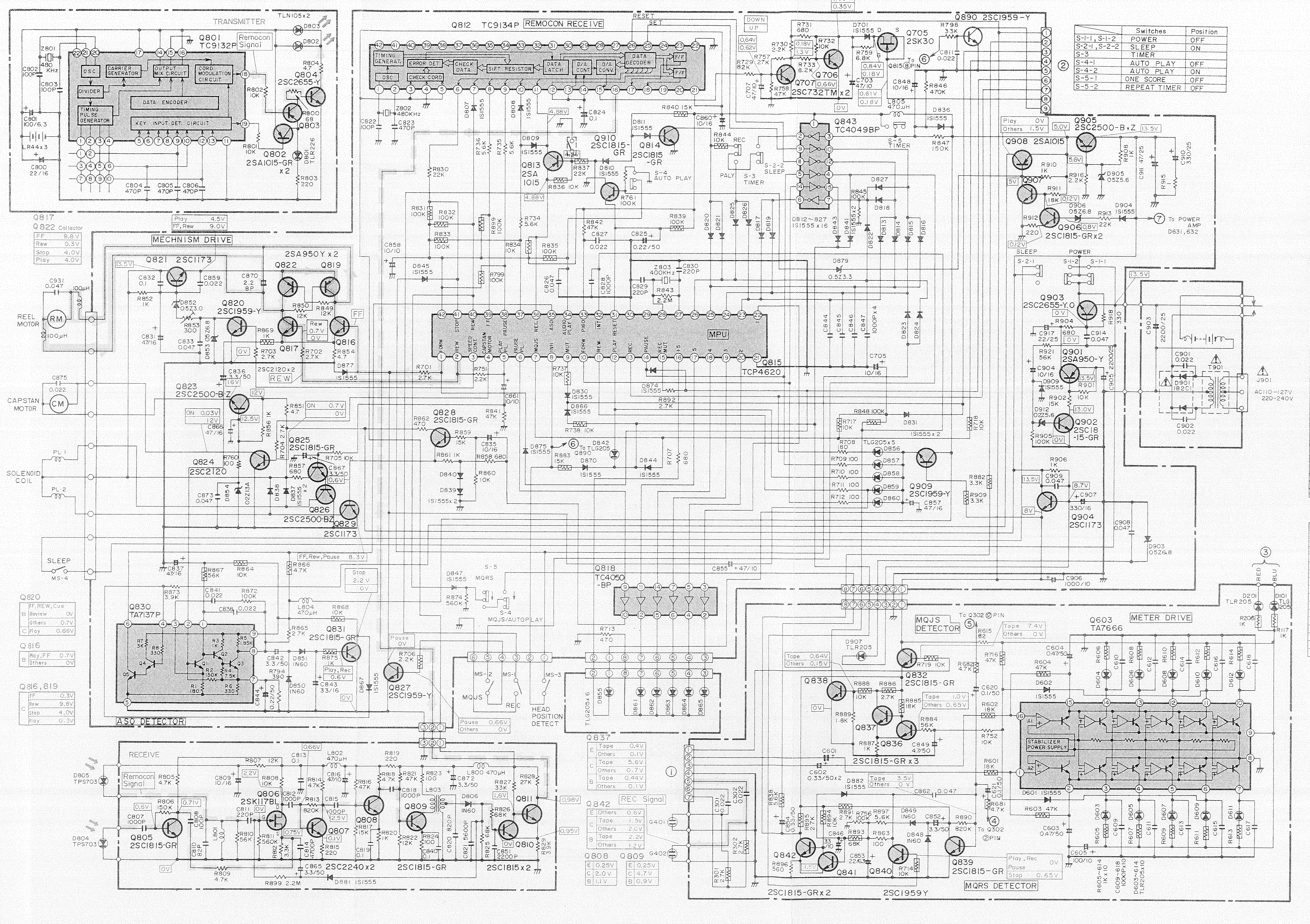
1	2	3	4	5	6	7	8	9
2.0V	0.6V	0.02V	0.02V	0V	0.3V	0.64V	2.6V	5.8V

Q884

	8	7	6	5	4	3	2	1
Rec	0V	1.5V		0V	6.2V	6.6V		0V
Tape				7.8V			8.0V	
Muting		1.5V	6.4V					
Others				6.7V	0V			8.0V
	9	10	11	12	13	14	15	16
Rec			0V	7.8V		6.8V	0V	
Tape	8.0V							
Others			7.2V	0V		0V	7.2V	

Figure 25

10.SCHEMATIC DIAGRAM (CONTROLS)


TRANSMITTER
Q801 TC9132P
Remocon Signal
Q804 2SC2655-Y
Q802 2SA1015-GR x2
Q803
Q812 TC9134P REMOCON RECEIVE
Q890 2SC1959-Y
Q705 2SK30
Q706
Q707 2SC732TM x2
Q843 TC4049BP
Q905 2SC2500-B·Z
Q908 2SA1015
Q907
Q906 2SC1815-GR x2
Q910 2SC1815-GR
Q814 2SC1815-GR
Q813 2SA1015
MECHNISM DRIVE
Q821 2SC1173
2SA950Y x2
Q822
Q819
Q820 2SC1959-Y
Q817
Q816
Q823 2SC2500-B·Z
Q825 2SC1815-GR
Q824 2SC2120
Q826 2SC2500-B·Z
Q829 2SC1173
Q828 2SC1815-GR
MPU
Q815 TCP4620
REEL MOTOR
CAPSTAN MOTOR
SOLENOID COIL
SLEEP
Q903 2SC2655-Y,O
Q901 2SA950-Y
Q902 2SC1815-GR
Q909 2SC1959-Y
Q904 2SC1173
J901 AC110-127V 220-240V
Q818 TC4050-BP
Q830 TA7137P
ASO DETECTOR
Q831 2SC1815-GR
Q827 2SC1959-Y
MQJS
REC
HEAD POSITION DETECT
MQJS DETECTOR
Q832 2SC1815-GR
Q838
Q837
Q836 2SC1815-GR x3
Q603 TA7666
METER DRIVE
STABILIZER POWER SUPPLY
RECEIVE
Q806 2SK117BL
Q805 2SC1815-GR
Q807
Q808
Q809
Q810
Q811
2SC2240 x2
2SC1815-GR
2SC1815 x2
Q842
Q841
Q840
Q839 2SC1815-GR
MQRS DETECTOR
2SC1815-GR x 2
2SC1959Y

	Switches	Position
S-1-1, S-1-2	POWER	OFF
S-2-1, S-2-2	SLEEP	ON
S-3	TIMER	
S-4-1	AUTO PLAY	OFF
S-4-2	AUTO PLAY	ON
S-5-1	ONE SCORE	OFF
S-5-2	REPEAT TIMER	OFF

Q830

1		2.0V
2		0.6V
3		0V
4	Play	0V
	Others	1.6V
5		0V
6	Play	5.0V
	Others	0V
7		0.6V
8		2.2V
9		5.0V

Q812

1	2.4V		
2	2.2V	—	42
3	5.0V	—	41
4	0V	—	40
5	5.0V	—	39
6	5.0V	—	38
7	5.0V	—	37
8	5.0V	—	36
9	5.0V	—	35
10	5.0V	—	34
11	5.0V	—	33
12	4.8V	—	32
13	4.8V	—	31
14	4.8V	—	30
15	Up 0V	—	29
	Down 3.8V	—	28
16	—	—	27
17	—	5.0V	26
18	—	5.0V	25
19	—	—	24
20	—	—	23
21	5.0V	0V	22

Q843

1		—
2	Time off	5.0V
3		2.4V
4	Pause	3.8V
5	Pause	0V
	Others	5.0V
6		—
7		0V
8		—
9		5.0V
10		—
11		5.0V
12		—
13		—
14	FF	0.8V
	Others	5.0V
15		—
16		—

Q815

	FF	Rew	Pause	Play	CUE	Review	Stop
1	4.2V	0V	0V	4.1V	4.2V	0.01V	0V
2	0V	4.2V	0V	0V	0V	4.1V	0V
3	0V	0V	4.1V	4.1V	0V	0V	4.2V
4	4.1V	4.1V	4.1V	4.1V	4.1V	4.1V	0V
5	—	—	—	—	—	—	—
6	5.0V	5.0V	5.0V	0V	5.0V	5.0V	0V
7	0V	0V	0V	0V	4.5V	4.3V	0V
8	—	—	—	—	—	—	—
9	4.9V	4.9V	0V	0V	4.9V	4.9V	0V
10	0.8V	5.0V	5.0V	5.0V	0.8V	5.0V	5.0V
11	5.0V	0.8V	5.0V	5.0V	5.0V	0.8V	5.0V
12	5.0V	5.0V	0.7V	0.7V	0.7V	0.7V	5.0V
13	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	Rec 0.4V 5.0V
14	5.0V	5.0V	0.8V	5.0V	5.0V	5.0V	5.0V
15	Rec ,Pause Switch Push ON 0V , OFF 5.0V						
16	Count LED (5.0V) Lighting 0.8V						

17	LED Lighting 5.0V	18	LED Lighting 5.0V	19	LED Lighting 5.0V
20	LED Lighting 5.0V	21	0V	22	LED Lighting 5.0V
23	—	24	—	25	—
26	—	27	2.2V	28	2.2V
29	—	30	—	31	5.0V
32	0.3V	33	5.0V	34	5.0V
35	5.0V	36	—	37	—
38	—	39	—	40	—
41	—	42	5.0V		

Q603

1	1.4V	—
2	1.4V	—
3	6.0V	0.2V
4	6.0V	0.2V
5	6.0V	0.2V
6	6.0V	0.2V
7	6.0V	0.2V
8	0V	0V
9	7.6V	—
10	6.0V	0.2V
11	6.0V	0.2V
12	6.0V	0.2V
13	6.0V	0.2V
14	6.0V	0.2V
15	1.4V	—
16	1.4V	—
		Lighting LED

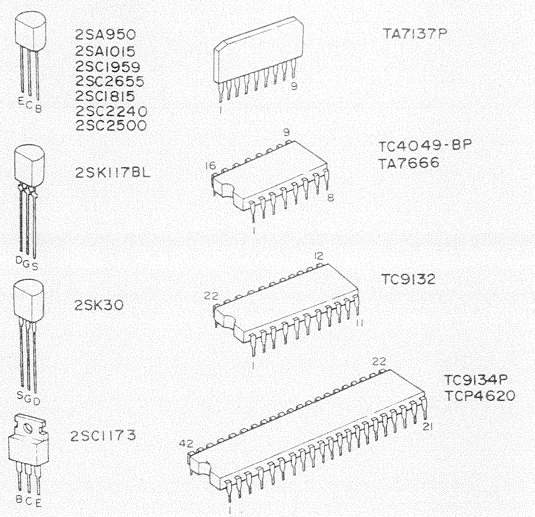
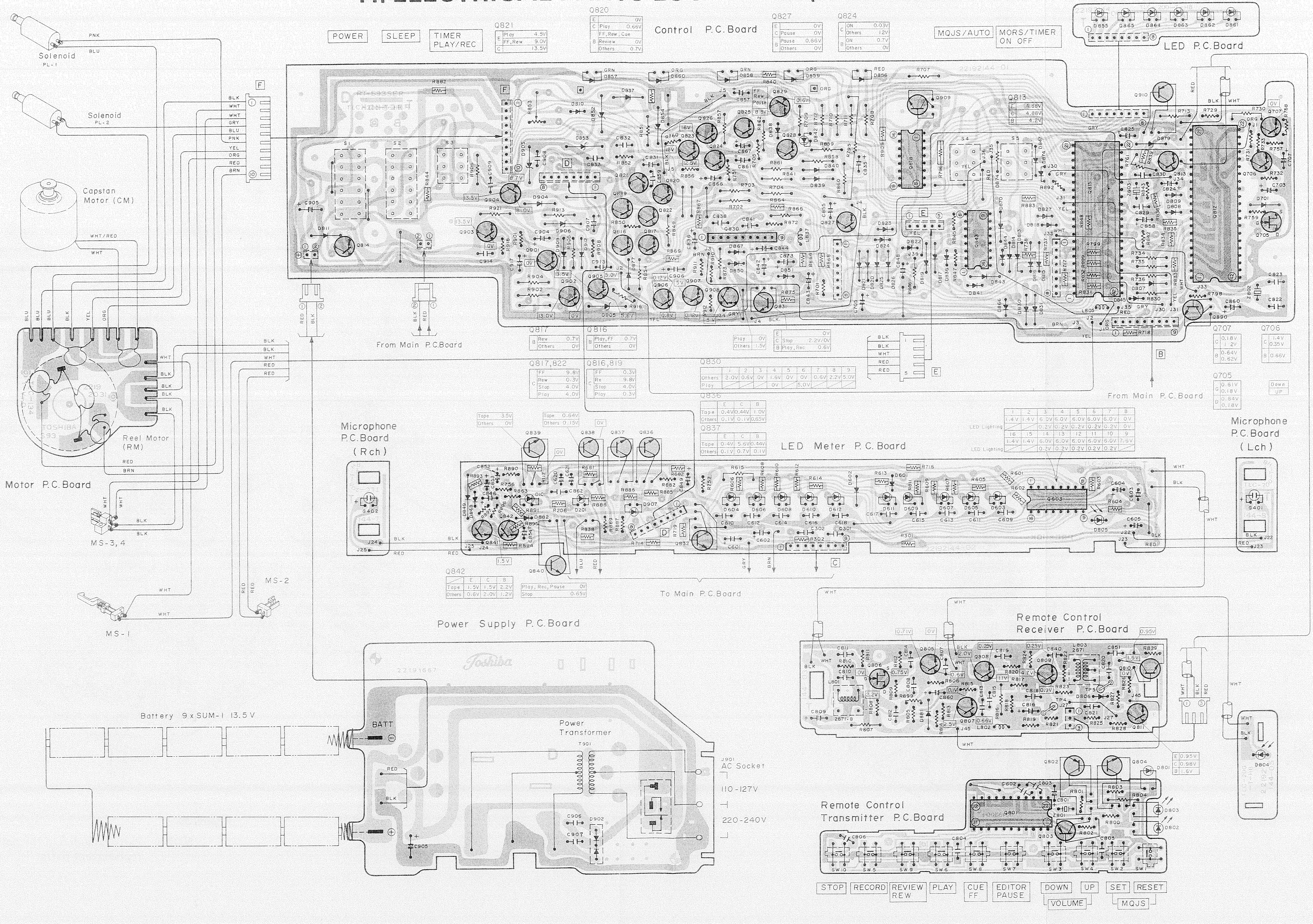

2SA950
2SA1015
2SC1959
2SC2655
2SC1815
2SC2240
2SC2500
E C B
2SK117BL
D G S
2SK30
S G D
2SC1173
B C E
TA7137P
TC4049-BP
TA7666
TC9132
TC9134P
TCP4620

Figure 26

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

11. ELECTRICAL PARTS LOCATIONS(CONTROLS)


POWER
SLEEP
TIMER PLAY/REC
Q821
E Play 4.5V
E FF, Rew 9.0V
C 13.5V
Q820
E 0V
C Play 0.66V
FF, Rew, Cue
B Review 0V
Others 0.7V
Control P.C. Board
Q827
E 0V
C Pause 0V
B Pause 0.66V
B Others 0V
Q824
C ON 0.03V
C Others 12V
B ON 0.7V
B Others 0V
MQJS/AUTO
MORS/TIMER ON OFF
LED P.C.Board
D855 D865 D864 D863 D862 D861
Solenoid PL-1
Solenoid PL-2
Capstan Motor (CM)
Reel Motor (RM)
Motor P.C.Board
MS-3, 4
MS-2
MS-1
PNK
BLU
BLK
WHT
GRY
YEL
ORG
RED
BRN
WHT/RED
F
D
E
B
C
S1 S2 S3 S4 S5
Q813
E 4.88V
C 4.88V
B 4.2V
Q817
B Rew 0.7V
B Others 0V
Q816
B Play, FF 0.7V
B Others 0V
Q817, 822
C FF 9.8V
C Rew 0.3V
C Stop 4.0V
C Play 4.0V
Q816, 819
C FF 0.3V
C Re 9.8V
C Stop 4.0V
C Play 0.3V
Play 0V
Others 1.5V
E 0V
C Stop 2.2V/0V
B Play, Rec 0.6V
Q830
1 2 3 4 5 6 7 8 9
Others 2.0V 0.6V 0V 1.6V 0V 0V 0.6V 2.2V 5.0V
Play 0V 5.0V
Q836
E C B
Tape 0.4V 0.44V 1.0V
Others 0.1V 0.1V 0.65V
Q837
E C B
Tape 0.4V 5.6V 0.44V
Others 0.1V 0.7V 0.1V
Tape 3.5V
Others 0V
Tape 0.64V
Others 0.15V
Q839 Q838 Q837 Q836
Q707
C 0.18V 1.2V
B 0.64V 0.62V
Q706
C 1.4V 0.35V
B 0.66V
Q705
G 0.61V 0.18V
D 0.84V 0.18V
Down
UP
From Main P.C.Board
1 2 3 4 5 6 7 8
1.4V 1.4V 6.0V 6.0V 6.0V 6.0V 6.0V 0V
LED Lighting 0.2V 0.2V 0.2V 0.2V 0.2V 0V
16 15 14 13 12 11 10 9
1.4V 1.4V 6.0V 6.0V 6.0V 6.0V 6.0V 7.6V
LED Lighting 0.2V 0.2V 0.2V 0.2V 0.2V
LED Meter P.C.Board
Microphone P.C.Board (Rch)
Microphone P.C.Board (Lch)
Q603
Q842
E C B
Tape 1.5V 1.5V 2.2V
Others 0.6V 2.0V 1.2V
Play, Rec, Pause 0V
Stop 0.65V
To Main P.C.Board
Power Supply P.C.Board
Battery 9 x SUM-1 13.5V
BATT
Power Transformer
T901
J901 AC Socket
110-127V
220-240V
Remote Control Receiver P.C.Board
Remote Control Transmitter P.C.Board
STOP
RECORD
REVIEW REW
PLAY
CUE FF
EDITOR PAUSE
DOWN
UP
VOLUME
SET
RESET
MQJS
E 0.95V
C 0.98V
B 1.5V

Q812

1	2.4V		
2	2.2V		42
3	5.0V		41
4	0V		40
5	5.0V		39
6	5.0V		38
7	5.0V		37
8	5.0V		36
9	5.0V		35
10	5.0V		34
11	5.0V		33
12	4.8V		32
13	4.8V		31
14	4.8V		30
15	Up 0V		29
	Down 3.8V		28
16			27
17		5.0V	26
18		5.0V	25
19			24
20			23
21	5.0V	0V	22

Q843

1	
2	Time OFF 5.0V
3	2.4V
4	Pause 3.8V
5	Pause 0V Others 5.0V
6	
7	0V
8	
9	5.0V
10	
11	5.0V
12	
13	
14	FF 0.8V Others 5.0V
15	
16	

Q815

	FF	Rew	Pause	Play	Cue	Review	Stop
1	4.2V	0V	0V	4.1V	4.2V	0.01V	0V
2	0V	4.2V	0V	0V	0V	4.1V	0V
3	0V	0V	4.1V	4.1V	0V	0V	4.2V
4	4.1V	4.1V	4.1V	4.1V	4.1V	4.1V	0V
5							
6	5.0V	5.0V	5.0V	0V	5.0V	5.0V	0V
7	0V	0V	0V	0V	4.5V	4.3V	0V
8							
9	4.9V	4.9V	0V	0V	4.9V	4.9V	0V
10	0.8V	5.0V	5.0V	5.0V	0.8V	5.0V	5.0V
11	5.0V	0.8V	5.0V	5.0V	5.0V	0.8V	5.0V
12	5.0V	5.0V	0.7V	0.7V	0.7V	0.7V	5.0V
13	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	Rec 0.4V 5.0V
14	5.0V	5.0V	0.8V	5.0V	5.0V	5.0V	5.0V
15	Rec, Pause Switch Push ON 0V, OFF 5.0V						

16	Count LED 5.0V Lighting 0.8V		25		34	5.0V
			26		35	5.0V
17	LED Lighting	5.0V	27	2.2V	36	
18			28	2.2V	37	
19			29		38	
20			30		39	
21		0V	31	5.0V	40	
22	LED Lighting	5.0V	32	0.2V	41	
23			33	5.0V	42	5.0V
24						

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

12-1. EXPLODED VIEW MECHANISM (UPPER)

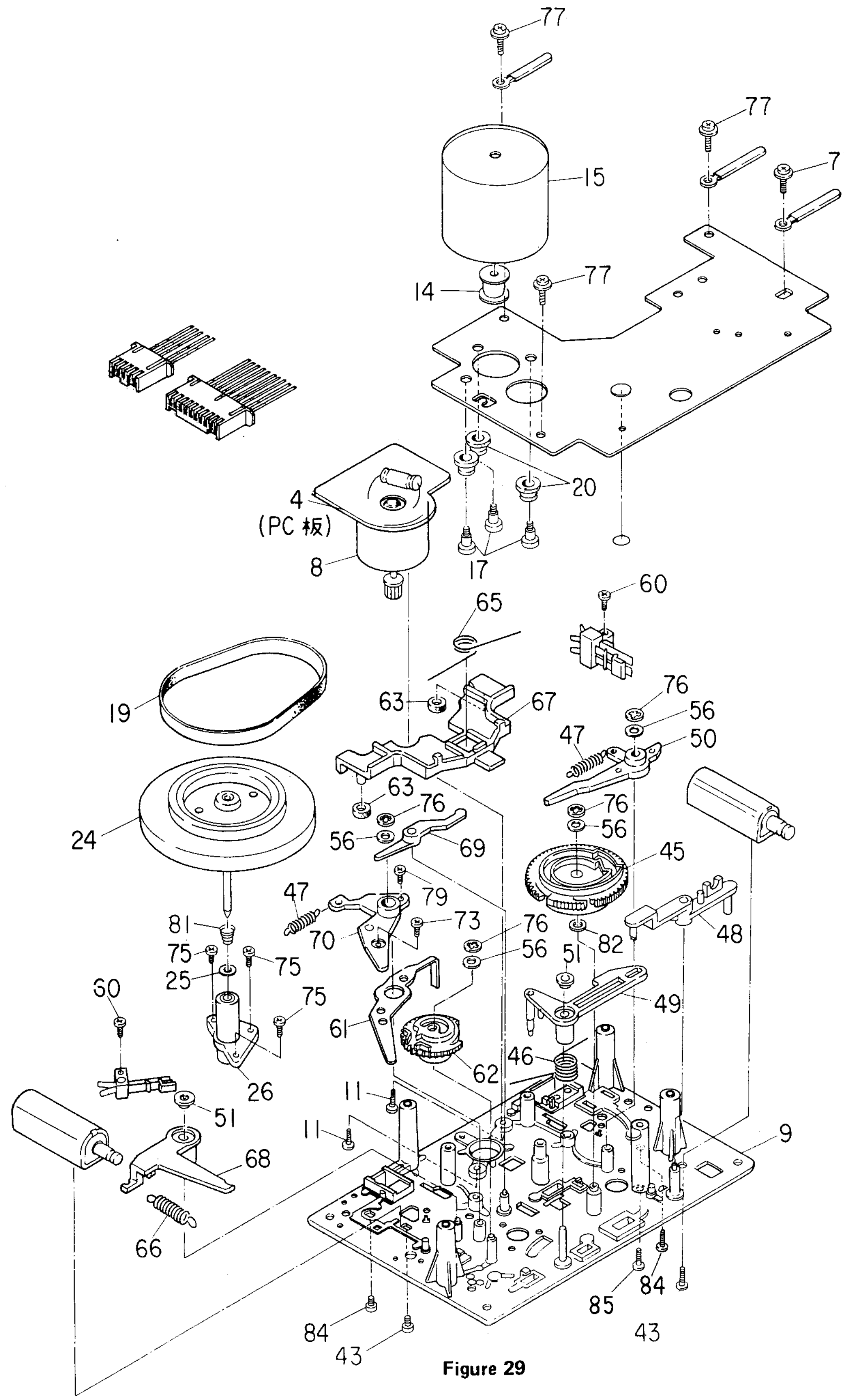

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Figure 29

NOTE: Parts excluded in the parts list are not available as replacement parts.

12-2. EXPLODED VIEW MECHANICAL (LOWER)

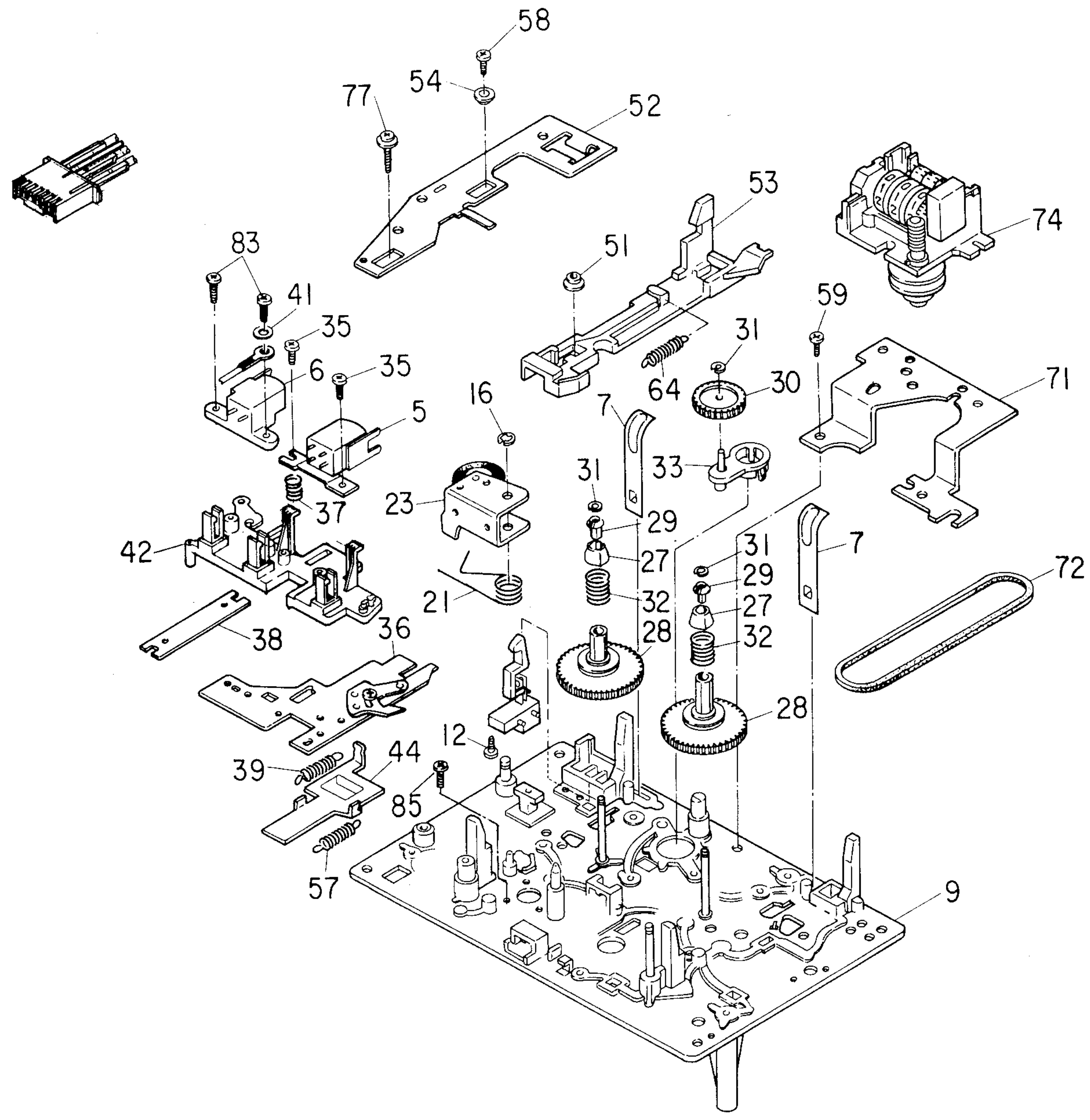
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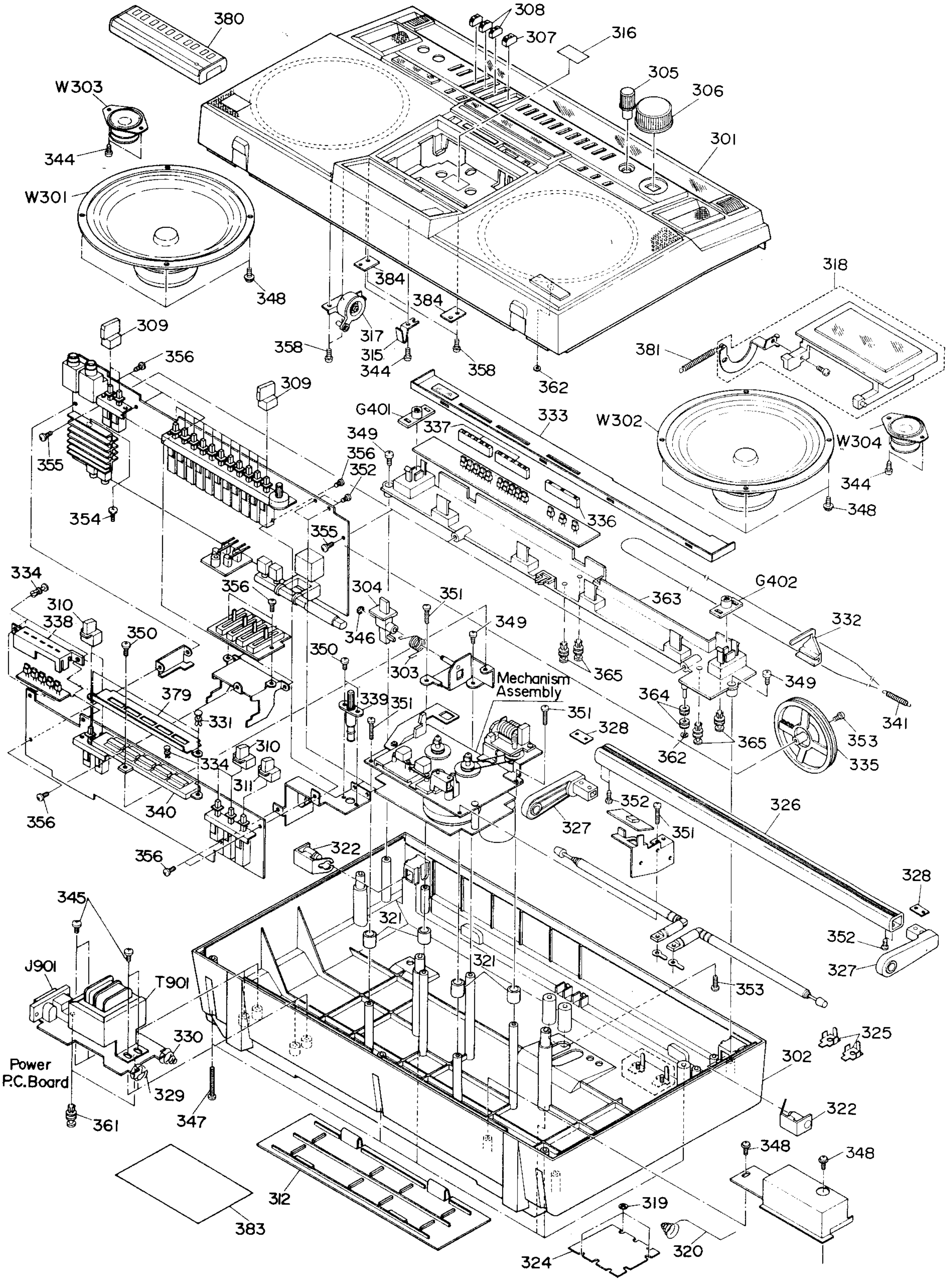
Figure 30

NOTE: Parts excluded in the parts list are not available as replacement parts.

12-3. PARTS LIST (MECHANISM)

Symbol No.	Part No.	Description
5	22217362	Head, Record/Playback, HRPT-80
6	22218249	Head, Erase, HET-65
8	25791357	Reel Motor Ass'y
9	25791305	Mechanism Chassis Ass'y
11	22701432	Screw, BID Hd., 2.6d x 8mml
12	22707301	Screw, BID Hd., Tapping, 2.6d x 8mml
14	25758103	Pulley, Motor
15	22125696	Motor
16	22703118	Retaining Ring, 2mmd
17	22707429	Screw, Special, 2.6d x 8mml
19	25755515	Belt, Drive
20	25761238	Cushion, Motor
21	25773526	Spring, Pressure Roller
22	25764593	Washer, Thrust, Flywheel
23	25717470	Pressure Roller
24	25717505	Flywheel Ass'y
25	25764486	Washer
26	25717472	Holder Ass'y, Capstan
27	25754304	Reel Collar
28	25754383	Reel Drum
29	25754384	Capstan Reel
30	25756241	Transfer Gear
31	25766050	Washer, Polyslider, 4mmd
32	25777033	Spring, Reel
33	25713542	Lever Ass'y, REW
34	25757120	Steel Ball, 3mmd
35	22707766	Screw, DTBID Hd., 2d x 13mml
37	25772240	Spring, Head
38	25779140	Spring, Head Slider
39	25776315	Spring
41	22703318	Washer, 2mmd
42	25783256	Head Mtg. Plate
43	22707475	Screw, BID Hd., 2.6d x 4mml
45	25756244	Cam Gear, Play
46	25773529	Spring, Play Lever
47	25776288	Spring
48	25782414	Lever, Plunger
49	25782415	Lever, Play Lock
50	25782422	Lever, Play
51	25783266	Bushing
53	25782504	Lock Slider
54	25783211	Bushing
56	22703269	Washer, 3mmd
57	25771806	Spring
58	22701245	Screw, BID Hd., Tapping, 2d x 6mml
59	22707350	Screw, DTBID Hd., 2.6d x 5mml
60	22707368	Screw, DTBID Hd., 2.6d x 10mml
61	25748534	Lever, Pause
62	25756278	Cam Gear, Pause
63	25761459	Cushion, Brake
64	25776404	Spring
65	25773530	Spring
66	25776403	Spring
67	25782416	Slider, Brake
68	25782417	Lever, Pause Lock
69	25782419	Lever, Brake
70	25782420	Lever, Pause
72	25755490	Belt, Counter
74	25873242	Counter
75	22707366	Screw, DTBID Hd., 2.6d x 6mml
76	20798033	Ring
77	22707361	Screw, TPAN Hd., 2.6d x 8mml with Washer
79	22707151	Screw, BID Hd., 2.6 x 5mml
81	25777071	Spring
82	25764597	Washer
83	22707692	Screw, DTBID Hd., 2d x 14mml
84	22707716	Screw, BID Hd., 2.6d x 3.5mml, BLK
85	22707426	Screw, DTBID Hd., 2d x 5mml

13-1. EXPLODED VIEW (CABINET)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W303
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W301
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358
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G401
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W302
W304
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G402
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303
Mechanism Assembly
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J901
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T901
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302
Power P.C.Board
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Figure 27

NOTE: Parts excluded in the parts list are not available as replacement parts.

12-2. EXPLODED VIEW (CABINET) PARTS LIST

Symbol No.	Part No.	Description
301	25881429	Cabinet Front Ass'y
302	25881432	Cabinet Back Ass'y
303	25773538	Spring, Eject Lever
304	25837536	Knob, Eject
305	25837598	Knob, Tone
306	25837666	Knob, Tuning
307	25837667	Knob, Slide Resistor
308	25837668	Knob, Slide Resistor
309	25837669	Knob, Push
310	25837670	Knob, Push
311	25837671	Knob, Push
312	25838546	Cover, Battery
315	25779221	Lock Spring
316	25824247	Reflector, Cassette Cover
317	22749313	Damper Ass'y
318	25881225	Cover Ass'y, Cassette
319	22702138	Push Nut, 3mmd
320	25772575	Battery Spring
322	25835444	Handle Shaft
324	25846427	Holder, Battery
326	25835426	Holder, Handle
327	25835443	Holder, Handle
328	25846369	Bracket, Handle
329	25772570	Battery Spring
330	25772571	Battery Spring
331	22705020	Plastic Rivet, 3d x 4.5mml
332	22741367	Pointer
333	22749330	Dial Plate Ass'y
334	22705022	Plastic Rivet, 3d x 5.5mml
335	22742201	Dial Drum
336	25844140	Holder, 3P LED
337	25844150	Holder, 5P LED
338	25844170	Holder, MQJS LED
339	22749311	Tuning Shaft Ass'y
340	25844171	Holder, LED
341	25771548	Spring, Drum
342	25881437	Case Front Ass'y, Remote Control
343	25881224	Case Back Ass'y, Remote Control
344	22701326	Screw, BID Hd., Tapping 3d x 8mml
345	22707472	Screw, BID Hd., Tapping 4d x 12mml
346	22703279	Retaining Ring, 3mmd
347	22701334	Screw, BID Hd., Tapping 3d x 35mml, BLK
348	22701434	Screw, TPAN Hd., 3d x 10mml with Washer
349	22707117	Screw, BID Hd., Tapping, 3d x 12mml

Symbol No.	Part No.	Description
350	22707520	Screw, DTBID Hd., 3d x 8mml
351	22707767	Screw, BID Hd., Tapping 3d x 35mml, RED
352	22707622	Screw, BID Hd., 2.6 x 8mml
353	22707473	Screw, BID Hd., 2.6 x 6mml
354	22707536	Screw, BID Hd., 3d x 10mml
355	22707118	Screw, BID Hd., Tapping 3d x 12mml
356	22707445	Screw, DTBID Hd., 3d x 6mml
357	22701325	Screw, BID Hd., Tapping, 3d x 8mml, BLK
358	22707390	Screw, BID Hd., 3d x 10mml, Chrome
361	22705034	Plastic Rivet, 3.5d x 5.5mml
362	22702125	Push Nut, 2.4mmd
363	22714116	Frame
364	22742162	Pulley
365	22742218	Pulley Ass'y
369	25838792	Cover, Battery, Remote Control
375	25779216	Battery Spring, Remote Control
376	25779215	Battery Spring, Remote Control
379	25808037	Decoration Plate, LED Operation
380	22120064	Remote Control Unit
381	25776405	Spring
382	22707390	Screw, BID Hd., Tapping, 2.6d x 8mml, Chrome

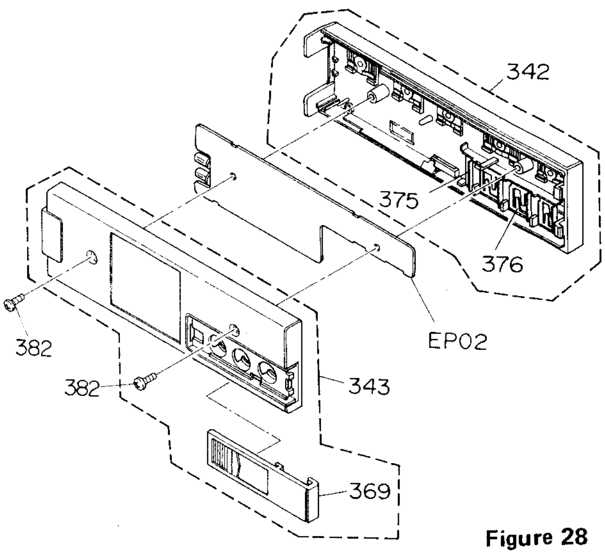


Figure 28

13. PARTS LIST

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, ICS & DIODES		
Q001	B0325270	IC, TA7335P
Q002	A6317460	Transistor, 2SC1815NEW-GR
Q101	B0355431	IC, TA7614AP-Y
Q102	A6317460	Transistor, 2SC1815NEW-GR
Q201	B0325350	IC, TA7343P
Q301	B0470162	IC, TC4016B
Q302	B0325125	IC, TA7328AP
Q303, 304	A6319300	Transistor, 2SC1959NEW-Y
Q305, 306, Q307, 308	A6048370	Transistor, 2SK30A-TM-GR
Q309, 310	A6317460	Transistor, 2SC1815NEW-GR
Q311, 312	A6319300	Transistor, 2SC1959NEW-Y
Q313	A6317460	Transistor, 2SC1815NEW-GR
Q315, 316	B031251A	IC, TA7137P-ST-Y
Q401	A6317460	Transistor, 2SC1815NEW-GR
Q403, 404	A6319300	Transistor, 2SC1959NEW-Y
Q405, 406	A6733140	Transistor, 2SC732TMNEW-BL
Q407, 408	A6317460	Transistor, 2SC1815NEW-GR
Q409, 410	A6733140	Transistor, 2SC732TMNEW-BL
Q411, 412	A6319300	Transistor, 2SC1959NEW-Y
Q501	A6317460	Transistor, 2SC1815NEW-GR
Q502	A6333320	Transistor, 2SC2655-Y
Q503 to Q506	A6048370	Transistor, 2SK30A-TM-GR
Q601, 602	B0319230	IC, TA7205AP
Q603	B0356660	IC, TA7666P
Q701 to Q704	A6319300	Transistor, 2SC1959NEW-Y
Q705	A6048370	Transistor, 2SK30A-TM-GR
Q706, 707	A6733140	Transistor, 2SC732TMNEW-BL
Q801	B0411320	IC, TC9132P
Q802, 803	A6534060	Transistor, 2SA1015-GR
Q804	A6333320	Transistor, 2SC2655-Y
Q805	A6317460	Transistor, 2SC1815NEW-GR
Q806	A6041880	Transistor, 2SK117-BL
Q807, 808	A6317460	Transistor, 2SC1815NEW-GR
Q809 to 811	A6317460	Transistor, 2SC1815NEW-GR
Q812	B0411340	IC, TC9134P
Q813	A6534060	Transistor, 2SA1015-GR
Q814	A6317460	Transistor, 2SC1815NEW-GR
Q815	22117085	IC, TCP4620AP-4111
Q816, 817	A6321240	Transistor, 2SC2120-Y
Q819	A6532940	Transistor, 2SA950-Y
Q820	A6319300	Transistor, 2SC1959NEW-Y
Q821	A677165D	Transistor, 2SC1173-Y
Q822	A6532940	Transistor, 2SA950-Y
Q823	A6330425	Transistor, 2SC2500-B, Z
Q824	A6321240	Transistor, 2SC2120-Y
Q825	A6317460	Transistor, 2SC1815NEW-GR
Q826	A6330425	Transistor, 2SC2500-B, Z
Q827	A6319300	Transistor, 2SC1959NEW-Y
Q828	A6317460	Transistor, 2SC1815NEW-GR
Q829	A677165D	Transistor, 2SC1173-Y
Q830	B031251A	IC, TA7137P-ST
Q831 to 839	A6317460	Transistor, 2SC1815NEW-GR
Q840	A6319300	Transistor, 2SC1959NEW-Y
Q841, 842, 845, 846	A6317460	Transistor, 2SC1815NEW-GR
Q890	A6319300	Transistor, 2SC1959NEW-Y
Q901	A6532940	Transistor, 2SA950-Y
Q902	A6317460	Transistor, 2SC1815NEW-GR
Q903	A6333320	Transistor, 2SC2655-Y
Q904	A677165D	Transistor, 2SC1173-Y
Q905	A6330425	Transistor, 2SC2500-B, Z
C906, 907	A6317460	Transistor, 2SC1815NEW-GR
Q908	A6534060	Transistor, 2SA1015-GR
Q909	A6319300	Transistor, 2SC1959NEW-Y
Q910	A6534060	Transistor, 2SA1015-GR
D001 to 005	A7246703	Diode, 1S1555V
D006	A7289000	Diode, 1S2236
D101	A8606630	Diode, LED, TLG205
D201	A8603110	Diode, LED, TLR205
D301 to 304	A7246703	Diode, 1S1555V
D401	A7109330	Diode, Zener, 05Z3.3
D501 to 506	A7246703	Diode, 1S1555V

Symbol No.	Part No.	Description
D601, 602	A7246703	Diode, 1S1555V
D603 to 612, 614	A8603110	Diode, LED, TLR205
D631, 633, 634	A7246703	Diode, 1S1555V
D701, 791, 793	A7246703	Diode, 1S1555V
D795 to 799	A7246703	Diode, 1S1555V
D801	A8603121	Diode, LED TLR226
D802, 803	A8610150	Diode, LED TLN105
D804, 805	A8652030	Diode, LED TPS703
D806	22115602	Diode, 1N60
D807 to 828	A7246703	Diode, 1S1555V
D830 to 837		
D839 to 841		
D843 to 845, 847		
D848, 849, 850, 851	22115602	Diode, 1N60
D852	A7109304	Diode, Zener, 05Z3.0-Y
D853	A7110100	Diode, Zener, 05Z6.8
D854	A7287700	Diode, Zener, 02Z13A
D855 to 860	A8606630	Diode, LED TLG205
D861 to 865	A8603110	Diode, LED TLR205
D866, 867, 871, 877, 878	A7246703	Diode, 1S1555V
D879	A7109330	Diode, Zener, 05Z3.3
D880 to 882	A7246703	Diode, 1S1555V
⚠ D901	A7682012	Diode, 1B2C1
D903, 906	A7109680	Diode, Zener 05Z6.8
D907	A8603110	Diode, LED TLR205
D909	A7246703	Diode, 1S1555V
D912	A7285900	Diode, Zener, 02Z5.6A

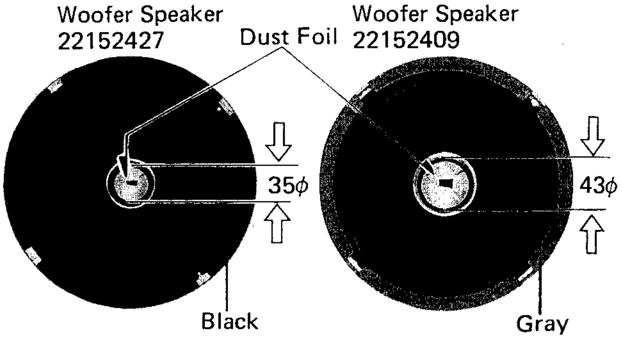
COILS & TRANSFORMERS

Symbol No.	Part No.	Description
L001	22294003	Coil, FM RF
L002	22294016	Coil, FM Oscillator
L003	22291103	Coil, Choke
L004	22282233	Coil, Antenna, SW1
L005	22285339	Coil, Antenna, SW2
L006	22242913	Coil, Bar Antenna, MW

Symbol No.	Part No.	Description
T101	22265817	IF Transformer, FM
T103	22264831	IF Transformer, AM
T104	22264830	IF Transformer, AM
T105	22265816	IF Transformer, FM
T106	22285322	Coil, Oscillator, SW2
T107	22285323	Coil, Oscillator, SW1
T108	22245384	Coil, Oscillator, MW
L201	22232219	Coil, Choke
L501	22241028	Coil, Choke
L502	22235018	Coil, Oscillator, Tape
L800, 802, 804, 805	22230106	Coil, Choke, 470μH
L801	22245396	Coil, 38 kHz Tuning
L803	22245392	Coil, Tuning
⚠ T901	22224103	Power Transformer
⚠ PL1	22147228	Plunger, Playback
⚠ PL2	22147232	Plunger

ELECTRICAL PARTS

Symbol No.	Part No.	Description
A001, 002	22124700	Rod Antenna
W301, 302	22152427	Speaker, 180mm Woofer (No. 1 to No. 7000)
W301, 302	22152409	Speaker, 80mm Woofer (From No. 7001)



(No. 1 to No. 7000) (From No. 7001)

When replacing woofer speakers, install new ones with care of the dust foil sizes observing from the front cabinet. Be sure to match the left one to left and the right one to right.

Symbol No.	Part No.	Description
W303, 304	22152372	Speaker, 40mm Tweeter
Z001	22153121	Filter, FM RF
Z101, 102	22153058	Filter, Ceramic, AM
Z103	22153070	Filter, Ceramic
Z201, 202	22153078	Filter, MPX
Z801	22153195	Quartz Oscillator
Z802	22153194	Quartz Oscillator

Symbol No.	Part No.	Description
Z803	22153188	Quartz Oscillator
J001. 002	22163666	Jack, 3.5mmd, Ext. Mic.
J003, 004	22163789	Jack, US-4P, Line-in
J007	22163708	Jack, Mic. Mixing
J008	22163744	Jack, 6mmd, Headphone
J009, 010	22163666	Jack, 3.5mmd, Ext. Speaker
⚠ J901	22167949	AC Socket
G401, 402	22154225	Built-in Microphone, EM-80N
S(1 to 10)	22195909	Switch, Key, Remote Control
S1-S3	22195908	Switch, Push, Power, Timer, Sleep
S4-S5	22195907	Switch, Push, MQJS, Auto-Repeat
S6-S7	22195906	Switch, Push, Mode/Beat Cut
S8, 9, 10, S11, 12, 13, 14, 15, 16, 17, 18	22196031	Switch, Push, Radio/Function/Tape Selector

CAPACITORS

Voltage Ratings of Ceramic and Plastic Capacitor are 50V DC unless otherwise noted.

D = ±0.25pF, J = ±5%, K = ±10%, M = ±20%, Z = +80 –20%

ABBREVIATIONS: CD = Ceramic Disk, PF = Plastic Film

EL = Electrolytic

Symbol No.	Part No.	Description
C001, 002 C003, 004, C006, 022, C124, 135	22308426	Variable with Trimmer
C006	22308426	Variable
C007	22362150	CD, 15pF, K
C008	22342223	CD, 0.022mfd, Z
C009	22342223	CD, 0.022mfd, Z
C010	22361220	CD, 22pF, J
C011	22360132	CD, 15pF, J, CH
C012	22360134	CD, 22pF, J, CH
C013	22360133	CD, 18pF, J, TH
C014	22342223	CD, 0.022mfd, Z
C015	22483470	EL, 47mfd, 10V
C016	22361220	CD, 22pF, J
C017	22362820	CD, 82pF, K
C018, 020	22309168	Trimmer, SW2 Ant. SW1 Ant.
C023	22361409	CD, 4pF, D
C024	22342223	CD, 0.022mfd, Z
C025, 026	22342223	CD, 0.022mfd, Z
C027	22362331	CD, 0.022mfd, K
C028	22342223	CD, 0.022mfd, Z
C101, 102	22342223	CD, 0.022mfd, Z
C103	22342473	CD, 0.047mfd, Z
C104	22488478	EL, 0.47mfd, 50V
C105	22361409	CD, 4pF, D

Symbol No.	Part No.	Description
C107	22440450	EL, 47mfd, 10V
C109	22440450	EL, 47mfd, 10V
C110	22485100	EL, 10mfd, 16V
C112	22360331	PF, 0.047mfd, M
C113	22349391	CD, 390pF, K
C114	22360333	PF, 0.1mfd, M, 25V
C115	22483101	EL, 100mfd, 10V
C116	22342223	CD, 0.022mfd, Z
C117	22440494	EL, 47mfd, 16V
C118	22342473	CD, 0.047mfd, Z
C119	22360332	PF, 0.068mfd, M
C120	22342223	CD, 0.022mfd, Z
C121	22321058	PF, 1200pF, J
C122, 123	22309168	Trimmer, SW2 Ant., SW1 Ant.
C125	22342223	CD, 0.022mfd, Z
C126	22321065	PF, 4700pF, J
C127	22342223	CD, 0.022mfd, Z
C128	22321016	PF, 360pF, J
C129	22342223	CD, 0.022mfd, Z
C130, 131	22342223	CD, 0.022mfd, Z
C135	22361809	CD, 8pF, D
C138	22342223	CD, 0.022mfd, Z
C139	22360333	PF, 0.1mfd, M, 25V
C201	22362101	CD, 100pF, K
C202	22488478	EL, 0.47mfd, 50V
C203	22488109	EL, 1mfd, 50V
C204	22488339	EL, 3.3mfd, 50V
C205	22483470	EL, 47mfd, 10V
C206	22321057	PF, 1000pF, J
C207	22488229	EL, 2.2mfd, 50V
C209	22488478	EL, 0.47mfd, 50V
C210	22488478	EL, 0.47mfd, 50V
C211, 212	22371222	PF, 2200pF, J
C213	22349221	CD, 220pF, K
C301	22342223	CD, 0.022mfd, Z
C302	22342223	CD, 0.022mfd, Z
C303, 304	22360331	PF, 0.047mfd, M
C305	22483470	EL, 47mfd, 10V
C306	22483471	EL, 470mfd, 10V
C307, 308	22468478	EL, 0.47mfd, 50V
C309, 310	22349102	CD, 1000pF, K
C311, 312	22485330	EL, 33mfd, 16V
C313, 314	22362101	CD, 100pF, K
C315, 316	22349472	CD, 4700pF, K
C317, 318	22488109	EL, 1mfd, 50V
C319	22349472	CD, 4700pF, K
C320	22349472	CD, 4700pF, K
C321, 322	22349152	CD, 1500pF, K
C323, 324	22488478	EL, 0.47mfd, 50V

Symbol No.	Part No.	Description
C325, 326	22488479	EL, 4.7mfd, 50V
C327, 328	22342223	CD, 0.022mfd, Z
C329	22483470	EL, 47mfd, 10V
C331	22349101	CD, 100pF, K
C332	22360333	PF, 0.1mfd, M
C333, 334	22349332	CD, 3300pF, K
C335, 336	22488229	EL, 2.2mfd, 50V
C337, 338	22488339	EL, 3.3mfd, 50V
C339, 340	22483470	EL, 47mfd, 10V
C341, 342	22349101	CD, 100pF, K
C343, 344	22349102	CD, 1000pF, K
C345, 346	22483221	EL, 220mfd, 10V
C347, 348	22448339	EL, 33mfd, 50V
C349, 350	22480008	EL, 0.68mfd, 50V
C351, 352	22480006	EL, 0.33mfd, 50V
C353, 354	22488339	EL, 3.3mfd, 50V
C355, 356	22349152	CD, 1500pF, K
C357, 358	22360404	PF, 0.047mfd, M
C359, 360	22360404	PF, 0.047mfd, M
C361, 362	22490030	EL, 0.68mfd, 35V
C363, 364	22349271	CD, 270pF, K
C365	22483471	EL, 470mfd, 10V
C367, 368	22488478	EL, 0.47mfd, 50V
C369, 370	22349272	CD, 2700pF, K
C371, 372	22475479	EL, 4.7mfd, 16V, None polarity
C401	22488109	EL, 1mfd, 50V
C402	22349102	CD, 1000pF, K
C403	22440450	EL, 47mfd, 10V
C404	22488478	EL, 0.47mfd, 50V
C405, 406	22349102	CD, 1000pF, K
C407, 408	22488339	EL, 3.3mfd, 50V
C409, 410	22488339	EL, 3.3mfd, 50V
C411, 412	22362331	CD, 330pF, K
C413, 414	22349152	CD, 1500pF, K
C415, 416	22349472	CD, 0.0047mfd
C417, 418	22360333	PF, 0.1mfd, M
C420	22483101	EL, 100mfd, 10V
C421, 422	22488478	EL, 0.47mfd, 50V
C423, 424	22349681	CD, 680pF, K
C425, 426	22468478	EL, 0.47mfd, 50V
C427	22483331	EL, 330mfd, 10V
C428	22483471	EL, 470mfd, 10V
C501	22485100	EL, 10mfd, 16V
C502	22372473	PF, 0.047mfd, K
C503	22372683	PF, 0.068mfd, K
C504	22483101	EL, 100mfd, 10V
C505	22483221	EL, 220mfd, 10V
C506	22362560	CD, 56pF, K

Symbol No.	Part No.	Description
C507	22361220	CD, 22pF, J
C508	22371682	PF, 6800pF, J
C509	22371103	PF, 0.01mfd, J
C510	22321210	PF, 0.1mfd, K
C511	22361609	CD, 6pF, D
C512	22321068	PF, 8200pF, J
C601, 602	22440470	EL, 0.33mfd, 50V
C603, 604	22488478	EL, 0.47mfd, 50V
C605	22440462	EL, 100mfd, 10V
C610, 611	22349102	CD, 1000pF, K
C611, 612	22349102	CD, 1000pF, K
C613, 614	22349102	CD, 1000pF, K
C615, 616	22349102	CD, 1000pF, K
C617, 618	22349102	CD, 1000pF, K
C620, 621	22440439	EL, 0.1mfd, 50V
C631, 632	22468478	EL, 0.47mfd, 50V
C633, 634	22485331	EL, 330mfd, 16V
C635, 636	22349391	CD, 390pF, K
C637, 638	22349221	CD, 100pF, K
C639, 640	22349102	CD, 1000pF, K
C641, 642	22362101	CD, 100pF, K
C643, 644	22485101	EL, 100mfd, 16V
C645, 646	22360333	PF, 0.1mfd, M
C647, 648	22485220	EL, 22mfd, 16V
C649, 650	22372823	PF, 0.082mfd, K
C651, 652	22485222	EL, 2200mfd, 16V
C653	22440450	EL, 47mfd, 10V
C654	22488478	EL, 0.47mfd, 50V
C703	22483470	EL, 47mfd, 10V
C704	22349101	CD, 100pF, K
C705	22485100	EL, 10mfd, 16V
C707	22483470	EL, 47mfd, 10V
C710	22440443	EL, 4.7mfd, 50V
C712	22485100	EL, 10mfd, 16V
C750	22485220	EL, 22mfd, 16V
C801, 802	22483101	EL, 100mfd, 10V
C803, 403	22483101	EL, 100mfd, 10V
C804	22340173	CD, 470pF, K
C805	22340173	CD, 470pF, K
C806	22340173	CD, 470pF, K
C807	22349102	CD, 1000pF, K
C808	22362820	CD, 82pF, K
C809	22485100	EL, 10mfd, 16V
C810	22321056	PF, 820pF
C811	22349221	CD, 220pF, K
C812	22349102	CD, 1000pF, K
C813	22360333	PF, 0.1mfd, M

Symbol No.	Part No.	Description
C814	22371472	PF, 4700pF, J
C815	22349102	CD, 1000pF, K
C816	22483470	EL, 47mfd, 10V
C818	22349102	CD, 1000pF, K
C819	22360333	PF, 0.1mfd, M
C820	22321056	PF, 820pF, J
C821	22349562	CD, 5600pF, K
C822	22362101	CD, 100pF, K
C823	22349471	CD, 470pF, K
C824	22488109	EL, 1mfd, 50V
C825	22488228	EL, 0.22mfd, 50V
C826	22360404	PF, 0.047mfd, M
C827	22342223	CD, 0.022mfd, Z
C829, 830	22349221	CD, 220pF, K
C831	22485470	EL, 47mfd, 16V
C832	22360333	PF, 0.1mfd, M
C833	22342473	CD, 0.047mfd, Z
C835	22485100	EL, 10mfd, 16V
C836	22488339	EL, 3.3mfd, 50V
C837	22485470	EL, 47mfd, 16V
C838	22349472	CD, 4700pF, K
C840	22360333	PF, 0.1mfd, M
C841	22342223	CD, 0.022mfd, Z
C842	22488339	EL, 3.3mfd, 50V
C843	22485330	EL, 33mfd, 16V
C844	22488228	EL, 0.22mfd, 50V
C846	22440449	EL, 33mfd, 10V
C848	22485100	EL, 10mfd, 16V
C849	22440443	EL, 4.7mfd, 50V
C851	22349222	CD, 2200pF, K
C852	22440442	EL, 3.3mfd, 50V
C853	22440451	EL, 22mfd, 6.3V
C854	22488339	EL, 3.3mfd, 50V
C855	22483470	EL, 47mfd, 10V
C857	22485470	EL, 47mfd, 16V
C858	22485100	EL, 10mfd, 16V
C859	22342223	CD, 0.022mfd, Z
C860, 861	22485100	EL, 10mfd, 16V
C862	22360404	PF, 0.047mfd, M
C863	22485100	EL, 10mfd, 16V
C864	22342223	CD, 0.022mfd, Z
C865	22488339	EL, 3.3mfd, 50V
C866	22485470	EL, 47mfd, 16V
C867	22488339	EL, 3.3mfd, 50V
C868	22488109	EL, 1mfd, 50V
C870	22476229	EL, 2.2mfd, 25V
C871	22342223	CD, 0.022mfd, Z
C872	22488339	EL, 3.3mfd, 50V
C873	22342473	CD, 0.047mfd, Z

Symbol No.	Part No.	Description
C901, 902	22342223	CD, 0.022mfd, Z
C903	22485222	EL, 2200mfd, 16V
C904	22485100	EL, 10mfd, 16V
C905	22486222	EL, 2200mfd, 25V
C906	22483102	EL, 1000mfd, 10V
C907	22485331	EL, 330mfd, 16V
C908, 908	22342473	CD, 0.047mfd, Z
C910	22486331	EL, 330mfd, 25V
C911	22486470	EL, 47mfd, 25V
C913, 914	22342473	CD, 0.047mfd, Z
C917	22486220	EL, 22mfd, 25V

RESISTORS

Resistors are Carbon Film ¼W, ±5%, unless otherwise noted. K = 1,000, M = 1,000,000

Symbol No.	Part No.	Description
R001	22545103	10K ohm (PRC)
R002	22545471	470 ohm
R003	22545103	10K ohm (PRC)
R004	22545221	220 ohm
R006	22545103	10K ohm (PRC)
R007	22545103	10K ohm (PRC)
R008	22545103	10K ohm (PRC)
R101, 102	22555331	330 ohm
R103	22555104	100K ohm
R104	22545104	100K ohm (PRC)
R105	22545563	56K ohm
R106, 107	22545182	1.8K ohm
R109	22555221	220 ohm
R110	22543229	Y . . . . 2.2 ohm
R110	22543479	W . . . . 4.7 ohm
R111	22545820	82 ohm
R112	22555223	22K ohm
R113	22555224	220K ohm (PRC)
R114	22555332	3.3K ohm
R115	22545102	1K ohm
R116	22555393	39K ohm
R117	22555102	1K ohm
R118	22555332	3.3K ohm
R119	22555223	22K ohm
R120	22545101	100 ohm
R121	22545472	4.7K ohm (PRC)
R123	22555223	22K ohm
R124	22625420	Variable, 16mmd, 50K-B Fine Tuning
R125	22545682	6.8K ohm (PRC)

Symbol No.	Part No.	Description
R126	22545123	12K ohm (PRC)
R127	22545123	12K ohm (PRC)
R128	22545470	47 ohm
R129	22545820	82 ohm
R130	22555562	5.6K ohm
R201	22545102	1K ohm (PRC)
R202	22658599	Semi-fixed Variable, 10K ohm-B, Free Run
R203	22545562	5.6K ohm (PRC)
R204	22555184	180K ohm
R205	22543101	100 ohm, 1/8W
R206	22545102	1K ohm (PRC)
R207, 208	22555332	3.3K ohm
R209	22540526	22K ohm, 1/8W
R210	22555223	22K ohm
R211, 212	22555102	1K ohm, ¼W
R301, 302	22545272	2.7K ohm (PRC)
R303, 304	22545222	2.2K ohm (PRC)
R305, 306	22545103	10K ohm (PRC)
R307	22545103	10K ohm (PRC)
R308	22545103	10K ohm (PRC)
R309, 310	22545102	1K ohm (PRC)
R311, 312	22545473	47K ohm (PRC)
R313, 314	22545473	47K ohm (PRC)
R315	22555221	220 ohm
R316	22545221	220 ohm
R317	22545334	330K ohm
R318	22555334	330K ohm
R319, 320	22545824	820K ohm
R321, 322	22555102	1K ohm
R323, 324	22555225	2.2M ohm
R325	22555103	10K ohm
R326	22545103	10K ohm (PRC)
R327, 328	22545273	27K ohm (PRC)
R329, 330	22555225	2.2 M ohm
R331, 332	22555225	2.2M ohm
R333, 334	22555474	470K ohm
R335, 336	22555472	4.7K ohm
R337, 338	22545182	1.8K ohm
R339, 340	22545102	1K ohm
R341	22545392	3.9K ohm
R342	22555225	2.2M ohm
R343, 344	22555272	2.7K ohm (PRC)
R345	22555272	2.7K ohm
R346	22545272	2.7K ohm (PRC)
R349	22545103	10K ohm
R350	22545103	10K ohm (PRC)
R351	22545561	560 ohm (PRC)
R352	22545561	560 ohm (PRC)
R353, 354	22555101	100 ohm
R355, 356	22545563	56K ohm (PRC)

Symbol No.	Part No.	Description
R357, 358	22545103	10K ohm (PRC)
R359, 360	22555182	1.8K ohm
R361, 362	22545271	270 ohm
R363	22555123	12K ohm
R364	22545123	12K ohm
R365	22555102	1K ohm
R366	22545102	1K ohm
R367, 368	22545563	56K ohm (PRC)
R369, 370	22545274	270K ohm (PRC)
R371, 372	22625420	Variable, 50K-B Treble
R373, 374	22545153	15K ohm (PRC)
R375, 376	22657229	Variable, 100K ohm-B, Bass
R377, 378	22545102	1K ohm (PRC)
R379, 380	22545222	2.2K ohm (PRC)
R381, 382	22657227	Variable, 50K ohm, Volume
R383	22657228	Variable, 50K ohm-B Balance
R385, 386	22545272	2.7K ohm
R387, 388	22555391	390 ohm
R389, 390	22545103	10K ohm (PRC)
R397, 398	22555332	3.3K ohm
R402	22545681	680 ohm (PRC)
R403	22545184	180K ohm (PRC)
R404	22545221	220 ohm (PRC)
R405	22545152	1.5K ohm (PRC)
R407, 408	22545392	3.9K ohm (PRC)
R409, 410	22555562	5.6K ohm
R411	22555101	100 ohm, ¼W
R452, 453	22555474	470K ohm
R454, 455	22555102	1K ohm
R456, 457	22543103	10K ohm
R458, 459	22543106	10M ohm
R460	22555105	1M ohm
R461	22555104	100K ohm
R413, 414	22545393	39K ohm (PRC)
R415, 416	22555123	12K ohm, ¼W
R417, 418	22545331	330 ohm
R419, 420		2.7K ohm (PRC)
R421, 422	22545223	22K ohm
R423, 424	22555154	150K ohm
R425, 426	22555225	2.2M ohm
R427, 428	22555472	4.7K ohm
R429, 430	22555471	470 ohm
R431	22555152	1.5K ohm
R432	22545472	4.7K ohm (PRC)

Symbol No.	Part No.	Description
R501	22555270	27 ohm
R502	22555330	33 ohm
R503	22555270	27 ohm
R504	22543562	5.6 ohm, 1/8W
R505	22555152	1.5K ohm
R506	22555339	3.3 ohm
R507	22543106	10M ohm, 1/8W
R508, 509	22555225	2.2M ohm
R601, 602	22545183	18K ohm (PRC)
R603, 604	22545473	47K ohm (PRC)
R605 to 614	22545102	1K ohm (PRC)
R615	22543820	82 ohm, 1/8W
R617, 618	22545123	12K ohm (PRC)
R631, 632	22545473	47K ohm (PRC)
R634	22545681	680 ohm
R635	22545331	330 ohm
R636	22555331	330 ohm
R637, 638	22545102	1K ohm (PRC)
R639, 640	22545101	100 ohm (PRC)
R641	22545823	82K ohm (PRC)
R642	22545225	2.2M ohm
R681, 682	22555472	4.7K ohm
R683	22555101	100 ohm
R701	22555272	2.7K ohm
R702, 703	22545272	2.7K ohm
R704	22545272	2.7K ohm
R705	22555103	10K ohm
R706	22545222	2.2K ohm (PRC)
R707	22545471	470 ohm
R708	22545181	180 ohm
R709, 710	22545101	100 ohm
R711, 712	22545101	100 ohm
R713	22545471	470 ohm
R714	22545103	10K ohm (PRC)
R715	22555272	2.7K ohm
R716	22545473	47K ohm (PRC)
R717, 718	22545103	10K ohm (PRC)
R719	22545103	10K ohm (PRC)
R720	22555103	10K ohm
R721	22545392	3.9K ohm (PRC)
R722	22545102	1K ohm (PRC)
R723	22555821	820 ohm
R724	22545332	3.3K ohm (PRC)
R725	22545102	1K ohm (PRC)
R727, 728	22545332	3.3K ohm (PRC)
R729	22555823	82K ohm
R730	22545222	2.2K ohm
R731	22555681	680 ohm
R732	22555103	10K ohm
R733	22555822	8.2K ohm

Symbol No.	Part No.	Description
R734	22545562	5.6K ohm
R735, 736	22545562	5.6K ohm
R737, 738	22545103	10K ohm (PRC)
R739	22545223	22K ohm (PRC)
R741	22545332	3.3K ohm (PRC)
R742	22545102	1K ohm (PRC)
R745	22545223	22K ohm
R747	22545392	3.9K ohm (PRC)
R750	22545392	3.9K ohm (PRC)
R751	22555222	2.2K ohm
R752	22540522	10K ohm, 1/8W
R755	22555273	27K ohm
R756	22540534	100K ohm, 1/8W
R757	22555273	27K ohm
R758	22555473	47K ohm
R759	22555682	6.8K ohm
R760	22555101	100 ohm
R761	22555104	100K ohm
R762	22555563	56K ohm
R763	22555332	3.3K ohm
R766, 767	22555102	1K ohm
R779	22545104	100K ohm (PRC)
R794	22555391	390 ohm
R795	22545393	39K ohm
R797	22545339	3.3K ohm (PRC)
R798	22555333	33K ohm
R802	22555103	10K ohm
R803	22555221	220 ohm
R804	22555479	4.7 ohm
R805	22555472	4.7K ohm
R806	22555154	150K ohm
R807	22545123	12K ohm
R808	22555103	10K ohm
R809	22555472	4.7K ohm
R810	22555563	56K ohm
R811	22540543	560K ohm, 1/8W
R812	22555332	3.3K ohm
R813	22555824	820K ohm
R814	22555472	4.7K ohm
R815	22555221	220 ohm
R816	22545473	47K ohm
R817	22555153	15K ohm
R818	22555472	4.7K ohm
R819	22555221	220 ohm
R820	22555102	1K ohm
R821	22555470	47 ohm
R822	22555123	12K ohm
R823, 824	22555101	100 ohm
R825, 826	22555683	68K ohm
R827	22555333	33K ohm
R828	22555273	27K ohm
R829	22555392	3.9K ohm

Symbol No.	Part No.	Description
R830	22545223	22K ohm
R831	22545101	100 ohm (PRC)
R832, 833	22545104	100K ohm (PRC)
R834	22545103	10K ohm (PRC)
R835	22545104	100K ohm (PRC)
R837	22545223	22K ohm (PRC)
R838	22545562	5.6K ohm (PRC)
R839	22545104	100K ohm (PRC)
R840	22545153	15K ohm (PRC)
R841	22545473	47K ohm
R842	22555473	47K ohm
R843	22555225	2.2M ohm
R844	22545103	10K ohm (PRC)
R845	22555104	100K ohm
R846	22545474	470K ohm
R847	22555154	150K ohm
R848	22545104	100K ohm (PRC)
R849	22545123	12K ohm
R850	22555123	12K ohm
R851	22547479	4.7 ohm, ½W
R852	22555102	1K ohm
R853	22658612	Semi-fixed Variable, 300 ohm
R854	22545479	4.7 ohm
R856	22555102	1K ohm
R857, 858	22545681	680 ohm
R859	22545153	15K ohm
R860	22545563	56K ohm
R861	22545102	1K ohm
R862	22545471	470 ohm
R863	22540498	100 ohm, 1/8W
R864	22545103	10K ohm (PRC)
R865	22545272	2.7K ohm
R866	22545472	4.7K ohm (PRC)
R867	22545562	56K ohm (PRC)
R868	22545103	10K ohm (PRC)
R869	22545102	1K ohm (PRC)
R870	22454223	22K ohm (PRC)
R872	22555104	100K ohm
R873	22545392	3.9K ohm
R874	22545561	560 ohm
R875	22545102	1K ohm (PRC)
R876, 877	22545104	100K ohm (PRC)
R879, 880	22555153	15K ohm (PRC)
R881	22545104	100K ohm
R883	22545332	3.3K ohm (PRC)
R884	22540531	56K ohm, 1/8W
R885	22545183	18K ohm (PRC)
R886	22545272	2.7K ohm (PRC)
R887	22540510	1K ohm, 1/8W
R888	22545103	10K ohm (PRC)
R889	22540513	1.8K ohm 1/8W
R890	22540545	820K ohm 1/8W

Symbol No.	Part No.	Description
R891	22545272	2.7K ohm (PRC)
R892	22555272	2.7K ohm (PRC)
R893	22545683	68K ohm (PRC)
R894	22545103	10K ohm (PRC)
R895	22545272	2.7K ohm (PRC)
R896	22540507	560 ohm, 1/8W
R897	22540519	15K ohm, 1/8W
R899	22555225	2.2M ohm
R901	22555103	10K ohm
R902	22545153	15K ohm
R904	22545681	680 ohm
R905	22545104	100K ohm
R906	22545102	1K ohm
R908	22555102	1K ohm
R909	22545332	3.3K ohm (PRC)
R910	22555102	1K ohm
R911	22555183	18K ohm
R912	22555221	220 ohm
R913	22545223	22K ohm
R915	22547109	1 ohm, ½W
R916	22555222	2.2K ohm
R918	22555331	330 ohm
R921	22545563	56K ohm
R925	22555101	100 ohm

ACCESSORIES

Symbol No.	Part No.	Description
AC01	22105357	Demonstration Tape, C-07
⚠ AC02	22176532	Power Supply Cord
AC03	22903335	Owner's Manual